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U.S. Department of the Interior  
Bureau of Land Management



Klamath Falls Resource Area Office  
2795 Anderson Avenue, Building #25  
Klamath Falls, Oregon 97603

January 2004

# Klamath Falls Resource Area Annual Program Summary and Monitoring Report Fiscal Year 2003



*Klamath Falls Resource Area - Ecosystem Diversity*

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Cover photographs clockwise from upper left:

McCartie Allotment, Bly Mountain Area - photograph by Bill Lindsey

Aspen Grove on Stukel Mountain - photograph by Bill Lindsey

Ben Hall Creek, Gerber Block (post-livestock grazing) - photograph by Bill Lindsey

Frosty Too Timber Sale (four years post-treatment) - photograph by Mike Bechdolt

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*Annual Program Summary and Monitoring Report - FY2003*

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Klamath Falls Resource Area

# **ANNUAL PROGRAM SUMMARY**

and

# **MONITORING REPORT FISCAL YEAR 2003**







# Public Input to this Document

Although the Annual Program Summary gives only a very basic and brief description of the programs, resources and activities in which the Klamath Falls Resource Area is involved, the report does give the reader a sense of the enormous scope, complexity and diversity involved in management of the Klamath Falls Resource Area public lands and resources. The managers and employees of the Klamath Falls Resource Area take pride in the accomplishments described in this report and value public input on this Annual Program Summary and Monitoring Report. In order for us to continually improve how information is displayed to the public for BLM activities in the Annual Program Summary, we request that you fill out this comment form and return it to us. It will assist us in making this document more understandable and easy to read for the public in future years.

**Please return your comments on the form following this page or any other format to:**

**Bureau of Land Management  
Klamath Falls Resource Area  
c/o Planner  
2795 Anderson Avenue, Building #25  
Klamath Falls, OR 97603**

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A periodic evaluation of land use plans and environmental review procedures is required by the Bureau’s planning regulations (43 Code of Federal Regulations (CFR), Part 1610.4-9) to determine the status of Resource Management Plan implementation, conformance and monitoring. The BLM planning handbook (H-1601-1, V, B.) states... *“Land use plan (LUP) evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment or revision.* The current evaluation period ended at the close of Fiscal Year 2003 and the evaluation process has begun. When completed, results will be made available to the public on the Lakeview District website:

[http://www.or.blm.gov/Lakeview/Planning/Plan\\_Updates\\_and\\_Evaluations](http://www.or.blm.gov/Lakeview/Planning/Plan_Updates_and_Evaluations).

**Thank you for taking the time to review this document.**

/s/ Jon Raby  
**Jon Raby, Field Manager  
Klamath Falls Resource Area**



# Public Input Form

## For the Klamath Falls Resource Area Annual Program Summary and Monitoring Report

Do you have a desire to have your name or address withheld from public release? \_\_\_\_\_ (Yes or No)

Did you find this document usable? \_\_\_\_\_ (Yes or No)

Could you understand what is displayed in this document? \_\_\_\_\_ (Yes or No)

What specifically didn't you understand? (i.e., Page #, or Table #, or ?)

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What suggestions do you have to make this document more usable?

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# Table of Contents

## ANNUAL PROGRAM SUMMARY

1.0 Introduction .....	3
2.0 Summary of Accomplishments .....	3
3.0 Budget and Employment .....	6
4.0 Land Use Allocations within the Klamath Falls Resource Area .....	6
Late-Successional Reserves and Assessments .....	8
Matrix .....	8
5.0 Aquatic Conservation Strategy .....	9
Riparian Reserves .....	9
Watershed Analysis and Key Watersheds .....	9
Watershed Restoration .....	10
Roads .....	10
Riparian Habitat Enhancement .....	10
Stream Restoration .....	12
6.0 Air Quality .....	12
7.0 Water and Soils .....	12
Water - Project Implementation .....	12
Soils – Project Implementation .....	12
Water - Inventory and Monitoring .....	12
Soils – Inventory and Monitoring .....	13
State-listed Clean Water Act 303d Streams .....	13
RMP Best Management Practices .....	14
8.0 Terrestrial Species and Habitat Management .....	14
Survey and Manage Species .....	14
Mollusks .....	15
Vertebrates .....	15
Threatened/Endangered Species .....	16
Northern Spotted Owl .....	16
Bald Eagle (Threatened) .....	16
Special Status Species-Animals .....	17
Peregrine Falcon (Bureau Sensitive) .....	17
Yellow Rails (Sensitive Species) .....	17
Bats (Five Sensitive Species) .....	17
Oregon Spotted Frog (Candidate Species) .....	17
Special Status Species - Plants .....	20

Other Species of Concern .....	20
Northern Goshawk and Other Accipiters .....	20
Forest Carnivores .....	20
Herptiles .....	20
Sage Grouse .....	21
Neotropical Migratory Landbirds .....	21
Terrestrial Habitat Management .....	21
Nest Sites, Activity Centers, and Rookeries .....	22
Big Game Habitat .....	22
 9.0 Aquatic Species and Habitat Management .....	23
Threatened/Endangered Species .....	23
Lost River and Shortnose Suckers .....	23
Bull Trout .....	24
Endangered Species Act Consultation .....	24
Aquatic Habitat Restoration .....	24
Klamath River Hydroelectric Facility Relicensing .....	25
 10.0 Pathogen, Disease, and Pest Management .....	25
 11.0 Weed Management .....	25
Inventories .....	25
Control .....	26
 12.0 Special Areas/Management .....	26
Wild and Scenic Rivers .....	26
Wilderness .....	27
Areas of Critical Environmental Concern .....	27
Klamath Canyon ACEC .....	27
Old Baldy Research Natural Area .....	28
Wood River Wetland ACEC .....	28
Environmental Education Areas .....	29
 13.0 Cultural Resources .....	30
 14.0 Visual Resources .....	30
 15.0 Rural Interface Areas .....	30
 16.0 Socioeconomic Conditions .....	31
Jobs-in-the-Woods .....	32
 17.0 Environmental Justice .....	34
 18.0 Recreation .....	34
Recreation Pipeline Restoration Funds .....	34
Recreation Projects .....	35

Recreation Fee Demonstration Project .....	36
Status of Recreation Plans .....	36
Volunteer Activities .....	37
Tourism .....	38
19.0 Forest Management and Timber Resources .....	38
Silvicultural Prescriptions .....	38
Timber Sale Planning .....	38
FY 2003 Timber Sale Accomplishments .....	39
Status of Sold & Awarded Klamath Falls RMP Timber Sales .....	40
Forest Development Activities .....	44
20.0 Special Forest Products .....	47
21.0 Energy and Minerals .....	48
22.0 Land Tenure Adjustments .....	48
23.0 Access and Rights-of-Way .....	49
24.0 Transportation and Roads .....	49
25.0 Hazardous Materials .....	50
26.0 Wildfire/Fuels Management .....	50
27.0 Law Enforcement .....	51
28.0 Rangeland Resources / Grazing Management .....	52
Fiscal Year 2003 Summary .....	53
Fiscal Years 1996-2003 Summary .....	54
Wild Horse Management .....	55
29.0 Cadastral Survey .....	56
30.0 Education and Outreach .....	56
31.0 Research .....	60
32.0 Coordination and Consultation .....	62
Federal Agencies .....	62
State of Oregon .....	63
Counties .....	63
Cities .....	63
Tribes .....	63
Watershed Councils .....	63



Chartered Advisory Groups ..... 64

Other Local Coordination and Cooperation ..... 65

33.0 National Environmental Policy Act Analysis and Documentation ..... 67

    NEPA documentation ..... 67

    Klamath Falls Resource Area Environmental Documentation ..... 67

    Protests and Appeals ..... 68

34.0 Plan Evaluation ..... 68

    Third Year Evaluation ..... 68

    Eighth Year Evaluation ..... 68

35.0 Plan Maintenance ..... 69

36.0 Plan Amendments ..... 77

MONITORING REPORT

Introduction ..... 80

All Land Use Allocations ..... 86

Late-Successional Reserves ..... 90

Matrix ..... 91

Riparian Reserves ..... 96

Air Quality ..... 98

Water and Soils ..... 100

Terrestrial Species Habitat ..... 105

Special Status and SEIS Special Attention Species Habitat ..... 109

Aquatic Species Habitat ..... 114

Noxious Weeds ..... 116

Special Areas ..... 117

Wild and Scenic Rivers ..... 119

Cultural Resources Including American Indian Values ..... 120

Visual Resources ..... 122

Rural Interface Areas ..... 123

Socioeconomic Conditions ..... 124

Recreation ..... 125

Forest Management and Timber Resources ..... 125

Special Forest/Natural Products ..... 126

Wildfire / Fuels Management ..... 128

Rangeland Resources / Grazing Management ..... 128

GLOSSARY / ACRONYMS ..... 135



# List of Tables

Table 2.1 – Summary of Resource Management Actions, Directions, and Accomplishments .....	4
Table 2.1 - Summary of Resource Management Actions, Directions, and Accomplishments (Cont.)	5
Table 3.1 - Resource Area Budget Fiscal Year 2003 .....	6
Table 4.1 - Land Use Allocation Fiscal Year 2003 .....	8
Table 5.1 - Watershed Analysis Schedule .....	10
Table 5.2 - Watershed Analysis Status Fiscal Year 2003 .....	10
Table 6.1 - Air Quality Management Fiscal Year 2003 .....	12
Table 7.1 - Watershed Activity Fiscal Year 2003 .....	13
Table 7.2 - KFRA Clean Water Act 303(d) Water Bodies .....	14
Table 8.1a - BLM /KFRA Special Status Species* Designations Summary - Animals .....	18
Table 8.1b - BLM Special Status Species List .....	19
Table 8.1c - BLM (KFRA) Special Status Species Designations Summary - Plants .....	20
Table 8.2 - Terrestrial Habitat Monitoring Fiscal Year 2003 .....	21
Table 8.3 - Monitoring for Nest Sites, Activity Centers, Rookeries, Special Habitats .....	22
Table 9.1 - Aquatic Habitat / Fish Passage Management Fiscal Year 2003 .....	23
Table 11.1 - Weed Management Fiscal Year 2002 .....	26
Table 12.1 - Special Areas Management Fiscal Year 2003 .....	29
Table 13.1 - Cultural Resources Management Fiscal Year 2003 .....	30
Table 16.1 - Total Payments in Lieu of Taxes and Acres by County for FY 2003 .....	32
Table 16.2 - O&C Payments To Counties FY 2003 .....	33
Table 16.3 - Jobs in the Woods Program Fiscal Year 2003 .....	33
Table 18.1 - Recreation Statistics Fiscal Year 2003 .....	34
Table 18.2 - Recreation Fee Demonstration Project Fiscal Year 2003 .....	36
Table 19.1 - Klamath Falls Timber Sale Volume (MBF) and Acres FY 2003 .....	40
Table 19.2 - Timber Volume Sold in FY 2003 .....	41
Table 19.3 - Harvest Activity for FY 2003 .....	41
Table 19.4 – Planned Timber Sales (FY 2004 & 2005) .....	41
Table 19.5 – Status of Sold and Awarded Timber Sales .....	42
Table 19.6 - Summary of Volume Sold .....	43
Table 19.7 - Volume and Acres Sold by Allocations .....	43
Table 19.8 - Timber Sales Sold by Harvest Types .....	43
Table 19.9 - Timber Sale Acres Sold by Age Class .....	44
Table 19.10 - Forest Development Activities .....	46
Table 20.1 - Special Forest Products Fiscal Year 2003 .....	47
Table 21.1 - Energy and Minerals Management Fiscal Year 2003 .....	48
Table 22.1 - Land Use Tenure Adjustments Fiscal Year 2003 .....	49
Table 24.1 - Roads and Transportation Management Fiscal Year 2003 .....	50
Table 25.1 - Hazardous Materials Management Fiscal Year 2003 .....	50
Table 26.1 - Fire and Fuels Management Fiscal Year 2003 .....	51
Table 27.1 - Law Enforcement Fiscal Year 2003 .....	51
Table 28.1 – Range Resources Management Fiscal Year 2003 .....	52
Table 29.1 - Cadastral Survey Summary Fiscal Year 2002 .....	56
Table 30.1 - Environmental Education/Outreach Program Summary FY2003 .....	59
Table 30.2 - Environmental Education/Outreach Special Events FY 2003 .....	59
Table 30.3 - Environmental Education/Outreach Programs & Tours FY 2003 .....	60

Table 32.1 - Challenge Cost Share Fiscal Year 2003 ..... 67

Table 33.1 - NEPA Analyses and Documentation Fiscal Year 2003 ..... 68

Table 35.1 - Redefined Survey and Manage Categories ..... 77

Table M.1 - Projects Monitored FY 2003 ..... 84

Table M-2 - FY 2003 Implementation Monitoring Selection Categories ..... 85

Table M-3 - Comparison of Projected vs. Actual Harvest Volume (MMBF)/Acres to Date ..... 85

Table M-4 - Timber Sale Volume and Acres Offered (Entire Resource Area) ..... 86

Table M-5 - Timber Sale Monitoring Summary ..... 92

Table M-6 - Post Treatment Stand Characteristics for Bly Mountain Timber Sale - FY 2003 ..... 93

Table M-7 - Status of Watershed Analysis ..... 101

**List of Figures**

Figure 1 - General Location Map .....2

Figure 2 - KFRA Land Allocations .....7

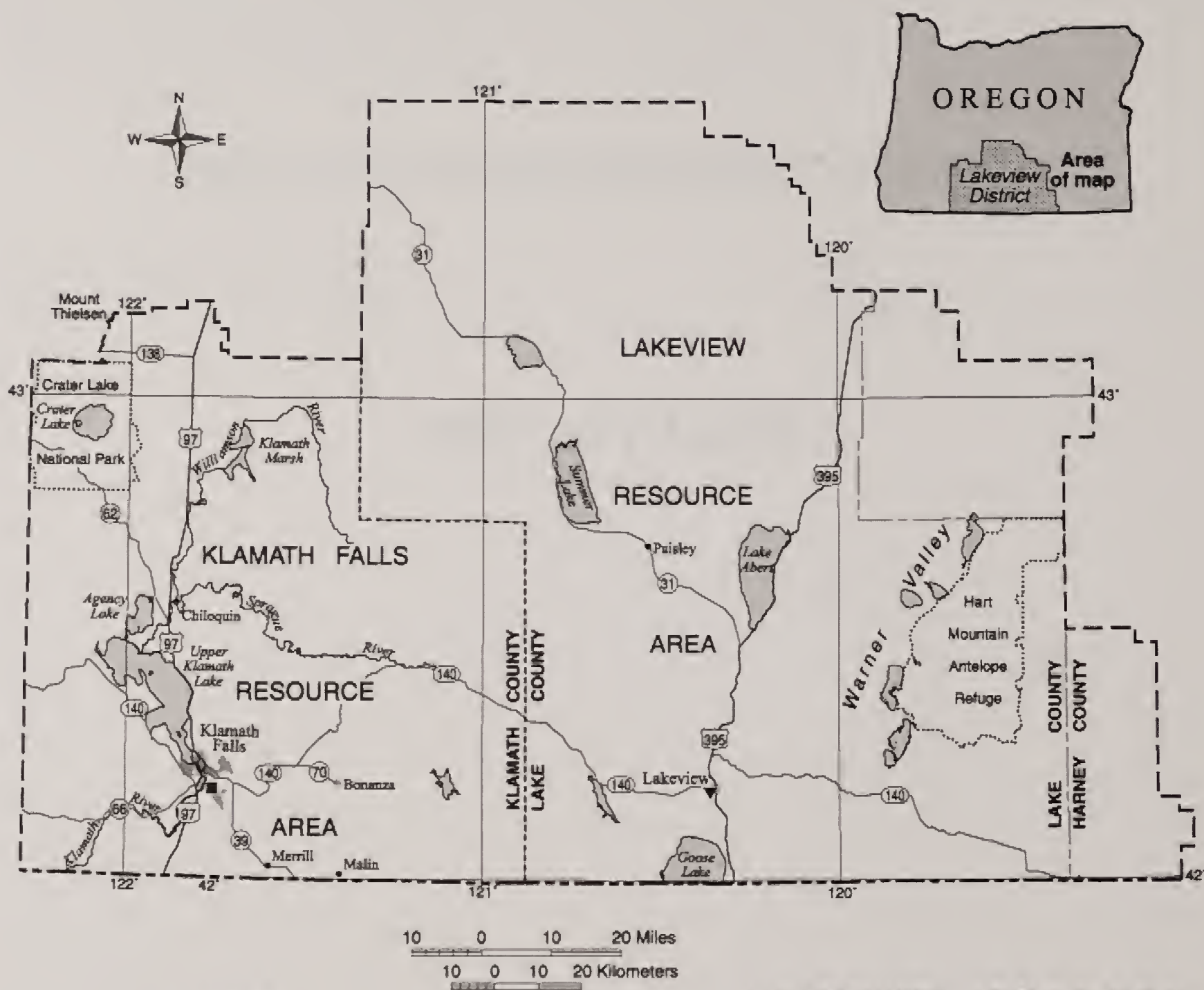
# **KLAMATH FALLS RESOURCE AREA**

## **ANNUAL PROGRAM SUMMARY**

**Fiscal Year 2003**



FIGURE 1 - GENERAL LOCATION MAP



### LEGEND

- ▼ BLM DISTRICT OFFICE
- BLM RESOURCE AREA OFFICE
- BLM DISTRICT BOUNDARY
- BLM RESOURCE AREA BOUNDARY
- - - - STATE BOUNDARY
- 97— U. S. HIGHWAY
- 38— STATE HIGHWAY

U.S. DEPARTMENT OF THE INTERIOR  
Bureau of Land Management  
**Lakeview District**  
2003



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# **KLAMATH FALLS RESOURCE AREA ANNUAL PROGRAM SUMMARY**

## **Fiscal Year 2003**

### **1.0 Introduction**

The Annual Program Summary is a review of the programs on the Klamath Falls Resource Area, Bureau of Land Management for the period of October 1, 2002 through September 30, 2003. The Klamath Falls Resource Area encompasses the southwestern portion of the Lakeview District, in southern Oregon (see Figure 1). This program summary is designed to report to the public, and local, state and federal agencies a broad overview of activities and accomplishments for fiscal year 2003 (FY 2003). Included with this Annual Program Summary is the Monitoring Report for the Klamath Falls Resource Area in FY 2003. These reports are a requirement of the Klamath Falls Resource Area Record of Decision and Resource Management Plan. The Annual Program Summary addresses the accomplishments of the Klamath Falls Resource Area and provides information concerning the Klamath Falls Resource Area budget, timber receipt collections, and payments to Klamath County. The results of the FY 2003 Annual Program Summary show that the Klamath Falls Resource Area is fully and successfully implementing the Northwest Forest Plan.

The Monitoring Report compiles the results and findings of implementation monitoring for fiscal year 2003, the eighth full fiscal year of implementation of the Klamath Falls Resource Area Resource Management Plan (RMP). The Monitoring Report, which is basically a "stand alone" document with a separate executive summary, follows the Annual Program Summary (APS) in this document.

Implementation of the Northwest Forest Plan began in April 1994 with the signing of the Northwest Forest Plan Record of Decision. Subsequently in June 1995, the Klamath Falls Resource Area began implementation of the Resource Management Plan, which incorporates all aspects of the Northwest Forest Plan, with the signing of the RMP Record of Decision. The record decision established a new allowable harvest level effective October 1, 1994, which is the beginning of fiscal year 1995, so related activities during the entire fiscal year 1995 are included in the accomplishments reported for fiscal year 1995.

### **2.0 Summary of Accomplishments**

The manner of reporting accomplishments differs between the various programs. Some resource programs lend themselves well to a statistical summary of activities while others are best summarized in short narratives. Table 2.1 provides a summary of the accomplishments for some resource activities for fiscal year 2003. These accomplishments are compared against cumulative accomplishments for 1995-2003. Further details concerning individual programs on the Klamath Falls Resource Area may be obtained by contacting the Klamath Falls Resource Area Office.

**Table 2.1 – Klamath Falls Resource Area, Fiscal Year 2003 Summary of Resource Management Actions, Directions, and Accomplishments**

<b><u>RMP Resource Allocation/ Management Practice/Activity</u></b>	<b><u>Activity Units</u></b>	<b><u>FY 2003 Accomplishments</u></b>	<b><u>FY 95-03 Cumulative</u></b>	<b><u>Projected Decadal Practices</u></b>
<b><u>Forest and Timber Resources</u></b>				
Regeneration harvest (acres sold)	Acres	129	193	1,640 *
Commercial thinning/density mgmt/	Acres	599	11,211	10,970*
Uneven age harvest (acres sold - HLB)				
Commercial thinning/density mgmt/	Acres	535	813	0
Uneven age harvest (acres sold - Reserves)				
Mortality Salvage	Acres	390	7,589	0
Timber volume sold (HLB)	MM board ft	11.416	59.4	63.10
	MM cubic ft	1.76	10.47	11.10
Timber volume sold (reserves)	MM board ft	0.144	0.829	0/0
	MM cubic feet	0.065	0.187	
Pre-commercial thinning (HLB)	Acres	188	1,508	700*
Pre-commercial thinning (Reserves)	Acres	0	0	0
Brushfield/hardwood conversion	Acres	0	0	0*
Site preparation	Acres	12	425	2,500*
Site preparation - other (specify)	Acres	0	0	0
Planting - regular stock	Acres	137	1,839	3,600*
Planting - genetically selected	Acres	0	0	1,150*
Vegetation control, mechanical/hand	Acres	243	2,644	2,250
Fertilization	Acres	0	0	320
Pruning	Acres	80	241	290
<b><u>Prescribed Fire/Fuels Treatment Accomplished</u></b>				
Prescribed Fire (hazard reduction)	Acres	0	320	2,500
Prescribed Fire (wildlife habitat/forage)	Acres	0	1,000	7,400
Natural/artificial ignition prescribed	Acres	10,446	51,882	75,000
fire for ecosystem enhancement				
Vegetation control, mechanical/hand	Acres	1,647	5,348	2,250
Juniper Removal	Acres	4,502	10,033	NA
<b><u>Noxious Weeds</u></b>				
Noxious weeds chemical control	Sites/acres	250/280	250/280**	260/300
Noxious weeds other control methods	Sites/acres	5/25	69/345	100/430

HLB = Harvest Land Base

\* Decadal accomplishments were estimated for only these elements in the RMP

\*\*Totals for previous years include repeat treatments on most areas.

**Table 2.1 - RMP Planning Area, Summary of Resource Management Actions, Directions, and Accomplishments (Continued)**

<b>RMP Resource Allocation/ Management Practice/Activity</b>	<b>Activity Units</b>	<b>FY 2003 Accomplishments</b>	<b>FY 95-03 Cumulative</b>	<b>Projected Decadal Practices</b>
<b><u>Rangeland Resources</u></b>				
Livestock grazing permits or leases	Permits/AUMs	10/949	95/21,577	150/25,000*
Animal Unit Months (actual)	AUMs	10,600	11,000 Average	NA
Livestock fences constructed	Miles	0	12	
Water developments	Actions	0	3	
<b><u>Realty Actions</u></b>				
Realty, land sales	Actions/Acres	2/120.77	2,080.77	NA
Realty, land purchase	Acres	0	0	NA
Realty, land exchanges	Actions	0	0	NA
	Acres acquired	0	0	NA
	Acres disposed	0	120	NA
Realty, R&PP leases/patents	Actions/Acres	0	0	NA
Realty, road rights-of-way acquired for public/agency use	Actions/miles	0	0	NA
Realty, road rights-of-way granted	Actions/miles	5/80.136	43/289.136	NA
Realty, utility rights-of-way granted	Actions/miles	1/11.43	4/15.43	NA
Realty, utility rights-of-way granted (communication sites)	Actions/acres	1/23	8/99	NA
Realty, withdrawals completed	Actions/acres	0/0	1/1	NA
Realty, withdrawals revoked	Actions/acres	0/0	11/11,281	NA
<b><u>Energy and Minerals Actions</u></b>				
Mineral/energy, oil and gas leases	Actions/acres	0/0	0/0	NA
Mineral/energy, total other leases	Actions/acres	0/0	49	NA
Mining plans approved	Actions/acres	0/0	0/0	NA
Mining claims patented	Actions/acres	0/0	0/0	NA
Mineral materials sites opened	Actions/acres	0/0	0/0	NA
Mineral material sites closed	Actions/acres	0/0	0/0	NA
<b><u>Recreation and Off-highway Vehicles</u></b>				
Maintained off-highway vehicle trails	Miles	0	0	NA
Maintained hiking trails	Miles	2	6	NA
Recreation sites maintained	Number	16	18	21
Special Use Permits	Actions	25	240	NA
<b><u>Cultural Resources</u></b>				
Cultural resource inventories	Sites/acres	84/15,354	549/89,609	NA
Cultural/historic sites nominated	Sites/acres	0/0	0/0	NA
<b><u>Hazardous Materials</u></b>				
Hazardous material sites identified	Sites	1	3	NA
Hazardous material sites remediated	Sites	1	2	NA



## 3.0 Budget and Employment

In fiscal year 2003, the Klamath Falls Resource Area had a total appropriation of approximately \$7.1 million. This included \$302,000 for Jobs-in-the-Woods program; \$1,104,000 for Management of Lands and Resources (MLR); \$796,000 for Oregon and California Railroad Lands (O&C); \$676,000 for Forest Ecosystem Health and Recovery; \$3,851,000 for prescribed fire; \$71,000 for Pipeline Recreation; and \$234,000 for Pipeline Timber. See Table 3.1.

Permanent employment has been relatively stable during the past seven years. In fiscal year 2003, there were 36 permanent employees on the resource area. The number of temporary (25) and term (38) employees varied throughout the year with a total peak employment of 99.

**Table 3.1 - Resource Area Budget Fiscal Year 2003**

<b><u>Budget Source</u></b>	<b><u>FY 2003 Dollars</u></b>
Management Land and Resource	\$1,184,000
O&C Lands	\$796,000
Forest Ecosystem Health and Recovery	\$676,000
Jobs in the Woods	\$302,000
Recreation Pipeline	\$71,000
Timber Sale Pipeline	\$234,000
Fire (Hazardous Fuels Reduction Program)	
Fuels Reduction Contracts	\$1,397,000
<u>Urban Interface Fuels Reduction</u>	<u>\$2,454,000</u>
<b>Total Resource Area Budget</b>	<b>\$7,114,000</b>

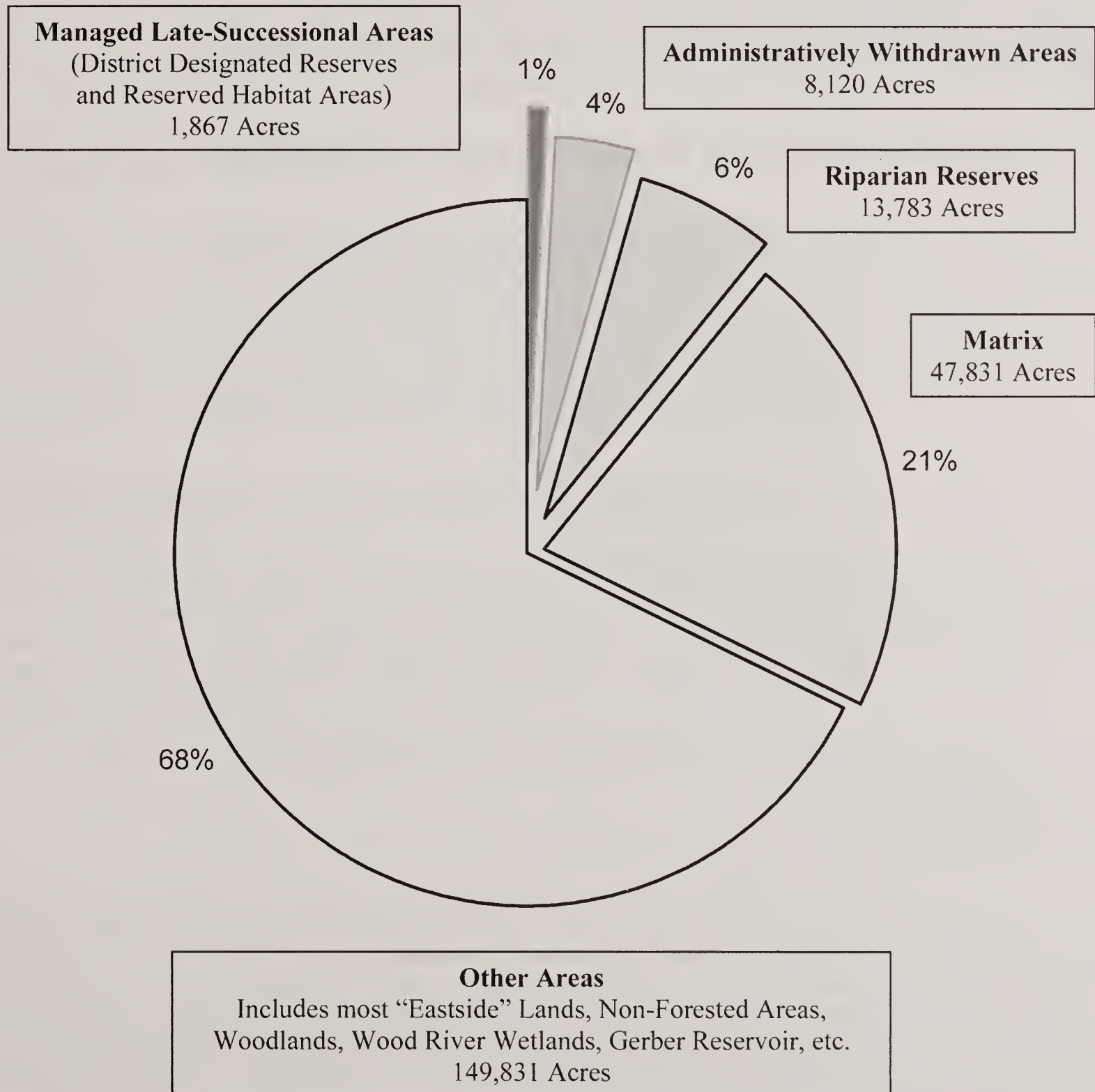
## 4.0 Land Use Allocations within the Klamath Falls Resource Area

There are approximately 221,000 acres of public land found within the Klamath Falls Resource Area. The Resource Management Plan approved in June of 1995 specified different land management allocations on different portions of the resource area. These allocations provide the emphasis for which activities may occur on each land area. Not all land use allocations and resource programs are discussed individually in a detailed manner in this Annual Program Summary because of the overlap of programs and projects. A detailed discussion of the various land use allocations or resource programs is not given in this Annual Program Summary, but can be found in the Resource Management Plan Record of Decision and supporting Environmental Impact Statement. For a listing of specific projects on the Klamath Falls Resource Area, see the Planning Updates that are generally published quarterly. These documents are available at the Klamath Falls Resource Area Office.

The Klamath Falls Resource Area is divided into "Westside" and "Eastside" lands. The Westside lands are further separated into key and non-key watersheds as stipulated in the Northwest Forest Plan. The acreages of land use allocations found within the Klamath Falls Resource Area are displayed in Table 4.1 and Figure 2.



**Figure 2 – KFRA Land Allocations**



**Table 4.1 - Land Use Allocation Fiscal Year 2003**

<u>Allocation (Based on Northwest Forest Plan ROD, page A-4)</u>	<u>Number of Acres</u>
Congressionally Reserved Areas	0
Late-Successional Reserves (and Late-Successional Reserves within AMA)	0
Adaptive Management Area	0
Managed Late-Successional Areas	
District Designated Reserves (Owl Core Centers and Reserved Habitat Areas)	1,867
Administratively Withdrawn Areas <sup>1</sup>	8,120
Riparian Reserves <sup>2</sup> (not within above allocations)	13,783
Matrix - General Forest Management Area (including Eastside operable lands)	32,350
Matrix - Connectivity/Diversity Blocks	0
<u>Other<sup>3</sup></u>	<u>149,831</u>
<b>Total<sup>4</sup></b>	<b>205,951</b>

<sup>1</sup>Includes Campgrounds, Research Natural Areas, ACECs, National Scenic Trail buffer

<sup>2</sup>GIS "Hyd" (Hydrology) Theme is presently being updated.

<sup>3</sup>Other "administratively withdrawn" lands not suitable for timber harvest (non-forest & non-operable)

<sup>4</sup>Total acreage includes approximately 3,220 acres at Wood River Wetland

## Late-Successional Reserves and Assessments

The Klamath Falls Resource Area does not contain any mapped Late Successional Reserves (LSRs). The closest mapped Late Successional Reserve is to the north on the adjoining Winema National Forest. The Klamath Falls Resource Area contains fifteen unmapped Late Successional Reserves (UMLSRs), three District Designated Reserves (DDRs), and one Special Area (an Environmental Education Area), all designated for old-growth values. Each reserve is approximately 100 acres in size for a total of approximately 1,900 acres in reserves designated for late-successional values. Unmapped LSRs function as habitat patches that provide connectivity between larger areas of old-growth habitat within mapped LSRs.

In FY 1997, vascular plant and non-vascular cryptogam (moss, liverworts, lichens, and fungi) inventories were conducted using a combination of cursory and intuitive survey methods to assess the biodiversity of each reserve. The inventory included collection, identification, photographing, and curing of selected specimens. In FY 1997, forest stand conditions in all 19 reserves were sampled using an adaptation of the procedures on the "Forest Survey Handbook, BLM Manual Supplement, Handbook 5250-1". Along with historical descriptions and past harvest data, this information served as a basis for written assessments of stand conditions in each reserve. A Late Successional Reserve Assessment (LSRA) was prepared in FY 2003 to assess all 19 of the reserves in the resource area. The LSRA was submitted to the Regional Ecosystem Office (REO) for review and approval in March of 2003.

## Matrix

The NFP/ROD (page C-44) and Klamath Falls Resource Area RMP ROD (page 56) require that the BLM and USFS provide for the retention of late-successional/old-growth fragments in the matrix, where little remains. The standards and guidelines are to be applied to any fifth field watershed in which federal forest lands are currently comprised of 15 percent or less late-successional forest, considering all land allocations. In preparing watershed analysis documents, the Resource Area completed an initial screening of watersheds including lands managed by the BLM-Redding Field Office, BLM-Alturas Field Office, BLM-Medford District Office, Klamath National Forest, Modoc National Forest, Rogue River National Forest, Winema National Forest, and the Fish and Wildlife Service, for compliance with the 15 percent retention standards and guidelines. Results from this analysis were reported in watershed analysis documents. Klamath Falls Resource Area FY 95 to FY 2003 sales sold under the NFP have complied with the 15 percent rule using the analysis.



A joint BLM/FS Instruction Memorandum was issued on September 14, 1998. This provided the final guidance for implementing the 15 percent standards and guidelines throughout the area covered by the NFP. Implementation of this guidance is required for all actions with decisions beginning October 1, 1999. A final 15 percent analysis was completed in 1999. The Lower Klamath Lake and Butte Creek fifth field watersheds have less than 15 percent late-successional forest (see Table 4.1). Regeneration harvest in these two watersheds will be deferred until the 15 percent standard is met.

## 5.0 Aquatic Conservation Strategy

The Aquatic Conservation Strategy (ACS) was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems. A set of Aquatic Conservation Strategy objectives was developed in the Northwest Forest Plan, to guide the review and implementation of management activities. The four components of the strategy -- Riparian Reserves, Key Watersheds, Watershed Analysis, and Watershed Restoration -- are designed to work together to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems.

### Riparian Reserves

Riparian Reserves are portions of watersheds where riparian-dependent resources receive primary emphasis and where special standards and guidelines from the Northwest Forest Plan (NFP) Record of Decision (ROD) apply. Riparian Reserves are established along the margins of standing or flowing water, intermittent stream channels and ephemeral ponds, and wetlands. In FY 2003, approximately 122 acres of Riparian Reserves were delineated adjacent to approximately 4.5 miles of streams, as well as adjacent to wetlands. These reserves were delineated within planned timber sale units.

### Watershed Analysis and Key Watersheds

Watershed analysis is required (NFP Record of Decision), prior to implementing activities in Key watersheds. Watershed analyses should also be conducted in other watersheds as a basis for ecosystem planning and management. The primary purpose is to provide decision makers with an understanding of the ecological structure, functions, processes, and interactions occurring in a watershed along with the wide spectrum of human uses.

This information is obtained from a variety of sources including field inventory and observation, agency records, old maps and photos, and survey records and will be utilized in *National Environmental Policy Act* (NEPA) documentation for specific projects and to facilitate compliance with the *Endangered Species Act* (ESA) and *Clean Water Act* (CWA) by providing additional information for consultation with other agencies.

Watershed analyses include:

- Analysis of at-risk fish species and stocks, their presence, habitat conditions and restoration needs;
- Descriptions of the landscape over time, including the impacts of humans, their role in shaping the landscape, and the effects of fire;
- The distribution and abundance of species and populations throughout the watershed;
- Characterization of the geologic and hydrologic conditions of the watershed.

Table 5.1 and Table 5.2 show the status of watershed analysis for the Klamath Falls Resource Area. In FY 2003, the watershed analysis for the Gerber-Willow Valley area was completed. To date, watershed analyses have been completed for most of the resource area including all



lands covered by the NFP. The remaining lands within the resource area are scattered parcels where resource management issues will be addressed on a case-by-case basis.

**Table 5.1 - Watershed Analysis Schedule**

<u>Watershed Name(s)</u>	<u>Key (Y/N)</u>	<u>Completion Date</u>	<u>BLM Acres</u>	<u>% Total</u>
Jenny Creek	Y	February, 1995	12,084	6 %
Spencer Ck/Clover Ck	Y	August, 1995	8,810	4 %
Topsy/Pokegama	N	July, 1996	30,457	14 %
Gerber/Willow Valley	N	July, 2003	112,000	53 %
Lost River (Dispersed PD)	N	(To be determined)	44,770	21%
Upper Sprague River	N	(To be determined)	4,879	2%
<b>TOTAL</b>			<b>213,000</b>	<b>100 %</b>

**Table 5.2 - Watershed Analysis Status Fiscal Year 2003**

Watershed Analyses Completed/ Key Watersheds included	4 / 3
Watershed Analyses Remaining/ Key Watersheds included	2 / 0
BLM acres with completed analysis/ Percent complete	163,351 / 77%
BLM acres without completed analysis/Percent incomplete	49,649 / 23%
Ongoing Watershed Analyses	0/0

## Watershed Restoration

### Roads

Watershed restoration involving road treatments ranges from obliteration to simple upgrading. Road treatments are identified during restoration planning or as part of other projects. When road-related resource concerns (such as habitat connectivity, water quality, diversion of flow paths, etc.) are identified, road treatments are developed to ensure that concerns are addressed in a way that accounts for current and future transportation needs.

With the large amount of mixed ownership in the forested lands, coordination with private landowners and other land management agencies is crucial to the success of any proposed road projects. Watershed analyses and coordinated planning efforts like the Spencer Creek Coordinated Resource Management Plan (CRMP), as well as road inventory data, provide a framework for road treatment decisions.

During FY 2003, four road-related restoration projects were completed. In the Spencer Creek watershed, 3.2 miles of road were obliterated, 8.5 miles were decommissioned, 0.5 miles of road were constructed (to facilitate road obliteration within a riparian reserve), and two culverts were removed. As part of the Kerwin Ranch meadow restoration project in the Klamath River canyon, about 0.5 miles of road were improved and about 800 feet of road were decommissioned. As part of an effort to reduce sediment delivery to streams in the Gerber Block, five road segments that cross fish-bearing streams were improved and 200 feet of road were obliterated. Finally, in the vicinity of the Keno Access road, fill material from a previously decommissioned stream crossing was moved away from an intermittent stream.

For a complete summary of road treatments, refer to Section 24.0 - Transportation and Roads and Table 24.1.

### Riparian Habitat Enhancement

Treatments that help maintain large conifers in Riparian Reserves are an important component of watershed restoration. Silvicultural practices have been implemented within riparian

reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain aquatic conservation strategy objectives. Silvicultural prescriptions are written to maintain uneven aged stands and to maintain and improve the health and resiliency of the shade intolerant species (ponderosa pine, sugar pine, and Douglas fir). Understory reduction prescriptions are used to reduce the density of shade-tolerant species under the tree canopy for the purpose of reducing fire risk and enhancing the health of desired overstory trees. The thinning of densely stocked young stands and the reforestation of shrub-dominated stands with conifers are also be used to enhance riparian habitat. In riparian ecosystems that are experiencing juniper encroachment, removal of juniper is done to enhance riparian plants such as aspen, willow, and sedges.

During FY2003, work progressed on about 15 acres of a planned 80-acre riparian thin along Spencer Creek (in addition to 47 acres completed between FYs 2000 and 2002). In addition, 18 acres within westside riparian reserves and 9 acres within eastside riparian areas were thinned as part of timber sales. Conifers were planted along 1 mile of road that was obliterated within the Miners Creek riparian reserve in FY 2002.

Planning and layout for 190 acres of understory thinning within 4 riparian reserves in the Jenny Creek watershed was completed in FY 2003 (the project will be implemented in FY 2004). Pre-treatment monitoring within these units included stand exams, photo points, stream shading, and water temperature.

Two projects designed to enhance wet meadows were completed in FY 2003. In the Gerber watershed, a 92-acre juniper treatment included portions of the DeVaul wet meadow riparian area. The Kerwin Ranch meadow restoration project in the Klamath River canyon involved reducing the impacts of roads and vehicle traffic on hydrologic processes, soils, and vegetation in a seasonal wet meadow. In addition to the road treatments previously described, three signs and a few hundred feet of fence were installed with significant volunteer effort from the 4 Runners of Klamath Falls and KFRA employees.



*Cooperators in the Kerwin Ranch Meadow Restoration, photograph by Kelly Hollums.*



## Stream Restoration

Instream restoration projects are necessary when passive restoration will not meet resource goals in the short-term. Such projects are designed to restore instream habitat complexity, and can include bank stabilization, channel realignment, or addition of boulders and woody debris. Potential instream projects are identified during watershed analysis or RMP development. No instream restoration projects were implemented in FY 2003.

## 6.0 Air Quality

The air quality program is mostly related to smoke impacts from natural and prescribed fires. The resource area has adopted the concept that the prescribed fire program is an integral part of ecosystem management under the RMP. Special care is taken to ensure that all prescribed fire projects are implemented in compliance with the Oregon Smoke Management Plan. Air quality considerations for the prescribed fire program include: burning when good smoke dispersal exists, and prompt mop-up of burned units to reduce residual smoke. No smoke intrusions are known to have occurred in designated areas (Table 6.1).

**Table 6.1 - Air Quality Management Fiscal Year 2003**

Smoke intrusions into designated areas	Not Available
Class 1 Airsheds in the Resource Area	None

## 7.0 Water and Soils

### Water - Project Implementation

As discussed in the Watershed Restoration section, numerous road-related projects that will benefit water resources were completed in FY 2003.

Fence repairs and maintenance were completed on 12 riparian enclosures and riparian pastures. These fences were established to reduce or eliminate livestock grazing impacts to the riparian areas.

### Soils – Project Implementation

As discussed in the ACS section of this document, one of the objectives of the Kerwin Ranch meadow restoration project was to enhance soil conditions in a seasonal wet meadow.

### Water - Inventory and Monitoring

Discharge and water temperature from 15 springs in the Gerber Block were measured throughout the summer of FY 2003 (Table 7.1). This was the second year of a multi-year monitoring effort, the primary objectives of which are to collect baseline data and to determine the effect of vegetation treatments on spring discharge. Two of the monitoring sites were selected for vegetation monitoring, which was carried out by KFRA range botanists.

Water temperature monitoring was carried out at 26 sites in 13 streams throughout watersheds that include portions of the resource area. The BLM cooperated with the Winema and Fremont National Forests and US Timberlands to ensure that the monitoring network was appropriately comprehensive.

In cooperation with the USGS, the BLM initiated a multi-year water quality monitoring effort at the Wood River Wetland. Components of this effort include characterizing water-quality conditions within the wetland, develop a preliminary water budget for the wetland, and developing a preliminary nutrient budget for the wetland.

An effort to map and assess the condition of vegetation and soils within riparian areas in the Gerber watershed was initiated in FY 2003. This information will be used to refine management plans for these areas and to develop water quality restoration plans. The data will also be useful for monitoring changes in riparian areas over time. The riparian mapping effort will continue in FY 2004. In both the Spencer Creek and Gerber watersheds, 15 monitoring stations designed to quantify sediment production from roads were measured. Riparian photo point monitoring was completed at 66 points on eleven streams or wet meadows. Streambank stability ratings were completed on two reaches of Ben Hall Creek at the end of the scheduled livestock season of use. Both locations had stability ratings of 98% or greater.

**Table 7.1 - Watershed Activity Fiscal Year 2003**

<b><u>Monitoring</u></b>	<b><u>FY2003</u></b>	<b><u>FY95-03</u></b>
Streams measured for Proper Functioning Condition (number/miles)	0/0	27/54.3
Streams monitored for water temperature	13	54
Springs monitored for water temperature	15	30
Streams measured for streamflow	0	0
Springs measured for flow (Gerber Block)	15	45
Sites measured for water chemistry	0	27
Sediment sampling stations (monitoring of road sediment)	30	75
Completed water rights applications with Oregon Water Resources	0	0

## **Soils – Inventory and Monitoring**

As part of a larger effort to understand the effects of juniper treatments on watershed processes, infiltration rates were compared between units that were thinned in 1993 and adjacent untreated areas. The monitoring conducted in FY 2003 was of limited scope, and served as a “pilot project” for developing future monitoring programs. Soil compaction monitoring was conducted in the Bly Mountain (post-treatment) and Saddled again (pre-treatment) timber sales.

## **State-listed Clean Water Act 303d Streams**

Section 303(d) of the *Clean Water Act* requires states to submit to the Environmental Protection Agency (EPA) a list of those waters which do not meet water quality standards as a result of either point, or non-point, sources, and which are in need of a total maximum daily load (TMDL) calculation as an aid in making progress towards solving the segment’s water quality problems. The Oregon 303(d) list was updated in late 2002. Table 7.2 lists nine streams, plus Agency Lake, in the KFRA identified as water-quality limited water bodies by the Oregon Department of Environmental Quality (ODEQ).

Also in late 2002, the TMDL for Upper Klamath Lake and it’s drainage was finalized. In cooperation with the USFS, the BLM prepared a Water Quality Management Plan that outlines how BLM management of the Wood River Wetland and other areas will lead to long term water quality restoration.



## RMP Best Management Practices

Best Management Practices are identified and required by the *Clean Water Act* as amended by the *Water Quality Act* of 1987. Best Management Practices are defined as methods, measures, or practices to protect water quality or soil properties. Best Management Practices are selected during the NEPA interdisciplinary process on a site specific basis to meet overall ecosystem management goals. The Klamath Falls Resource Area Record of Decision and Resource Management Plan lists Best Management Practices for various projects or activities that may be considered during the design of a project. Monitoring of the RMP during FY 2003 has shown that Best Management Practices have been appropriately implemented with a high degree of success.

**Table 7.2 - KFRA Clean Water Act 303(d) Water Bodies**

<u>Stream Name</u>	<u>Basin/Sub-basin</u>	<u>Criteria for listing</u>	<u>Water quality plan completed(?)</u>
Barnes Valley Creek	Klamath/Lost River	Temperature - Summer	No
Long Branch Creek	Klamath/Lost River	Temperature - Summer	No
Miller Creek	Klamath/Lost River	Temperature - Summer	No
Klamath River	Klamath/Lost River	Temperature - Summer	No
Clover Creek	Klamath/Upper Klamath	Habitat Modification, Sediment	No
Johnson Creek	Klamath/Upper Klamath	Temperature - Summer	No
Miners Creek	Klamath/Upper Klamath	Sediment	No
Spencer Creek	Klamath/Upper Klamath	Biological Criteria, Sediment	No
Antelope Creek	Klamath/Lost River	Temperature - Summer	No
Agency Lake*	Klamath/Upper Klamath	Chlorophyll a (Summer) Dissolved Oxygen, pH (Summer)	Yes

\*Wood River Wetland is adjacent to Agency Lake.

## 8.0 Terrestrial Species and Habitat Management

### Survey and Manage Species

Surveys for special status and special attention species (mollusks) are being conducted prior to ground disturbing activities. Pre-disturbance surveys are not required for any fungi, lichen or bryophyte species on the Klamath Falls Resource Area (2002 Annual Species Review and the 2001 Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001) .

In the Spring of 2003, Purposive Surveys for Survey and Manage fungi and mollusk species were conducted on nine District Designated/Late Successional Reserves and one WSA. In the fall of 2002 A Strategic Random Grid Survey was conducted at one Current Vegetation Survey (CVS) plots according to Strategic Survey protocols.

There are 194 Survey and Manage species listed in the 2002 Annual Species Review. Of the listed species, eight fungi species and one vascular plant are documented in the Klamath Falls Resource Area. (Refer to Tables 8.1a, 8.1b, and 8.1c for information on Special Status species). Pre-disturbance surveys are required for only one plant species under the 2002 Annual Species Review, a vascular plant species (*Cypripedium montanum*). Survey protocols have been developed for S&M vascular and non-vascular plants, and surveys have been

conducted in conjunction with surveys for other special status plant species in area proposed for ground disturbing activities.

Management Recommendations have been developed for S&M vascular plants, and some species of fungi, bryophytes, and lichens. Special status and special attention species sites on the Klamath Falls Resource Area are documented and are managed according to management recommendations for the particular species.

Klamath Falls Resource Area participates in entering S&M data into the Interagency Species Management System (ISMS). The staff members involved with survey and manage or protection buffer species have been trained in implementing survey protocols, species identification, and data entry.

## Mollusks

### Terrestrial

Only three species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), *Deroceras hesparium* (Evening field slug), and *Monadenia chaceana* (Klamath sideband), which potentially occur in the resource area, require pre-disturbance surveys under the 2002 Annual Species Review (March 2003) and the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2003, surveys according to protocols of potential habitat were conducted on approximately 1000 acres of land as follows: West Spencer Timber Sale, Southside slashbusting and prescribed burn, Shady slashbusting, Upper Johnson Creek riparian thinning. Purposive Surveys were done in 9 DDRs/LSRs and one WSA for terrestrial mollusks. A Survey and Manage "B" - survey all known sites- species, *Deroceras hesparium*, was found and verified from the Hornbill DDR during a purposive survey. More specimens of suspected *Deroceras hesparium* were sent to a regional taxonomic expert for species verification. In addition, five LSRs were surveyed by contractors for mollusks in the spring of 2003. The KFRA office provided a Project Inspector for the contract. Pre-disturbance surveys of suitable habitat for S&M terrestrial mollusks will continue for all potential ground disturbing activities.

### Aquatic

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. Pre-disturbance surveys for aquatic mollusks were conducted on approximately one mile of Johnson Creek Purposive Surveys were done in Surveyor Old Growth Education Area, and Johnson Creek DDR. Several specimens of *Fluminicola* sp. were collected and sent to a regional taxonomic expert for species determination. Pre-disturbance surveys for S&M aquatic mollusks will continue for all potential ground disturbing activities that may impact aquatic mollusks. Purposive surveys will continue in DDRs and Riparian Reserves. Current management recommendations for aquatic mollusk species (Management Recommendations for Survey and Manage Aquatic Mollusks Version 2.0) will be administered.

## Vertebrates

### Great Gray Owl

The Great Gray Owl is listed as a Survey and Manage species in the Northwest Forest Plan Record of Decision. The Great Gray Owl is not a Bureau sensitive species, but is a species that is tracked to obtain more information as to its status. Since 1996, the KFRA has conducted surveys to protocol in areas where ground-disturbing events are planned.

In 2003, ten different locations were surveyed for Great Gray Owl activity. The KFRA has six historically documented activity centers. The Great Gray Owl activity centers are concentrated in the Johnson Creek drainage, Hayden Creek drainage, and near Burton Butte.



In 2003, the KFRA wildlife staff monitored 20 Great Gray Owl artificial nest boxes installed in FY 2002 within riparian buffers on private timberlands. These nest boxes were established where the greatest concentration of Great Gray Owls have been consistently located in habitat that provides good foraging conditions, but may lack suitable nesting substrate. No owls had nested in the platforms in FY 2003.

## **Threatened/Endangered Species**

### **Northern Spotted Owl**

The Klamath Falls Resource Area currently contains 21,260 acres of suitable Northern Spotted Owl habitat. Of this, 6,676 acres are reserved or maintained as owl habitat. The reserves include 100-acre core areas near nesting owls plus other district-designated reserves. Riparian areas and preferred habitat areas are also managed to maintain owl habitat.

In 2003, the Bureau of Land Management worked cooperatively with the National Council of the Paper Industry for Air and Stream Improvement (NCASI), US Timberlands (UST) and Oregon State University (OSU) to continue the spotted owl program.

Under an existing MOU between the BLM and NCASI, ten spotted owl sites were incorporated into a five-year telemetry study conducted by NCASI in FY 2002. The goal is to evaluate the response of these owls to timber management practices. In 2003, 14 birds were radioed at nine sites. The remainder of the sites were monitored by OSU, or were jointly monitored by UST and BLM.

In addition to the monitoring, general surveys of suitable spotted owl habitat were conducted on eight historic sites and for the CHEW timber sale. No owls were detected in the timber sale area. Night time detections of a male spotted owl did occur at two historic sites, although the owls were not relocated on following visits.

Of the sixteen sites surveyed/monitored, eight were occupied with spotted owl pairs and two had single adults. Four pairs were confirmed nesting; of these, three nests failed. One site produced 2 young. Turnover of spotted owls was documented at four sites.

### **Bald Eagle (Threatened)**

Nineteen Bald Eagle nest territories and four winter roost areas are known to occur on BLM lands within the Klamath Falls Resource Area. In 2003, 16 of the 19 nest territories were occupied with at least one adult eagle, including one new nest territory. Of the occupied territories, eleven were successful in fledging a total of 19 young. Nest sites were monitored cooperatively with Oregon Cooperative Fish & Wildlife Research Unit, Oregon State University and U.S. Timberlands.

Fuels reduction treatments continued under and adjacent to one bald eagle nest in FY 2003. Treatments included piling and burning understory vegetation (brush and small trees) directly under the nest tree. This fuels reduction treatment is in preparation for future prescribed fire activities and nest stand protection in the event of a wildland fire. Prescribed fire activities are planned for FY 2004.

Midwinter surveys for Bald Eagles were again conducted this year. The counts are conducted annually in the month of January to monitor trends of wintering populations of bald eagles.



## Special Status Species-Animals

### Peregrine Falcon (Bureau Sensitive)

The Peregrine Falcon was de-listed from the Endangered Species Act in 1999. A Peregrine Falcon specialist was contracted to analyze potential Peregrine Falcon habitat for the Lakeview District. The KFRA has four areas rated as high for nesting potential. All four sites were surveyed in 2003. No Peregrine Falcons were detected. Three of the four sites were occupied by Prairie Falcons. Future surveys and monitoring will continue at these sites to help ascertain the presence/absence of peregrine falcons within the resource area.

### Yellow Rails (Sensitive Species)

BLM policy directs that our actions should avoid contributing to the need to list these species as threatened or endangered. The Yellow Rail was thought to be extirpated from the western U.S., until it was rediscovered in the Wood River Valley in 1982. The BLM's Fourmile Creek wetland harbors one of the largest breeding populations in Oregon. For the past seven years, the resource area has participated in a cooperative agreement between The Nature Conservancy, Winema National Forest, and the Oregon Department of Fish and Wildlife to conduct a study of breeding Yellow Rails on the Fourmile area and Wood River Wetland. The Wood River Wetland was surveyed in 2003. In general, populations on BLM lands appeared to be less than in past years, however the overall trend appears to be stable.

### Bats (Five Sensitive Species)

In 2003, the Gerber Watershed was formally surveyed for bats and twelve bat houses were monitored in the Gerber Reservoir area. Survey support was provided by an OIT student and personnel from the Willamette National Forest and USFWS. Potential foraging and roosting areas were surveyed using a variety of methods. Ten surveys were conducted at eight sites and 10 species were documented. Of these, four species have special status listing: Yuma myotis (*Myotis yumanensis*), Long-eared myotis (*Myotis evotis*), Silver-haired bat (*Lasionycterus noctivagans*), and Pallid bat (*Antrozous pallidus*).

Under the RMP, the resource area is to minimize human disturbance to the maternity colony of Townsend's big-eared bats (*Corynorhinus townsendii*) at Salt Caves on the Klamath River. A seasonal closure is in place from May 1 through September 15 at this site. In 2003, a Decision Record for the Cave Management Plan EA was prepared which included recommendations for long-term adaptive management and monitoring. Four bat houses were monitored in the Klamath River Canyon and at the Wood River Wetland. In both of these areas, myotis species were documented using the boxes as day roosts.

### Oregon Spotted Frog (Candidate Species)

The Oregon spotted frog is known to exist at three locations (Tunnel Creek, Wood River Wetland, and Fourmile Creek) within the KFRA. The majority of the Wood River Wetland area was surveyed in mid-March for egg masses to determine if the spotted frog may have established new territories due to the expansion of potential habitat within the interior of the wetland. Oregon Spotted Frogs were found in past habitat locations, but more egg masses were noted than in 2002. Bullfrog tadpole and subadult numbers have increased dramatically since 2000 at the Wood River Wetland.

**Table 8.1a - BLM /KFRA Special Status Species\* Designations Summary - Animals**

<u>Designation</u>	<u>Code</u>	<u># of species</u>	<u># of species/taxa group</u>
Federally Endangered	FE	None	
Federally Threatened	LT	2	2 birds
Federally Proposed	PE/PT	None	
Federal Candidate	C	1	1 amphibian
Federal Species of Concern	SoC	22	5 mammals, 12 birds, 1 amphibian, 4 reptiles
BLM Sensitive	BS	None	
BLM Sensitive Oregon	BSO	9	1 mammal, 7 birds, 1 reptile
BLM Assessment	BA	None	
BLM Assessment Oregon	BAO	5	5 birds
BLM Tracking	BT	13	3 mammals, 6 birds, 2 amphibians, 2 reptiles
BLM Tracking Oregon	BTO	12	4 mammals, 6 birds, 2 reptiles
Survey and Manage	SM	4	1 bird, 3 mollusks
State Listed Endangered	LE	1	1 bird
State Sensitive Critical	SC	11	1 mammals, 8 birds, 1 amphibian, 1 reptile
State Sensitive Vulnerable	SV	16	2 mammals, 8 birds, 2 amphibians, 4 reptiles
State Sensitive Peripheral	SP	2	2 birds
State Sensitive Undetermined	SU	8	4 mammals, 4 birds
ONHP** List 1	1	4	2 birds, 1 amphibian, 1 reptile
ONHP List 2	2	12	1 mammal, 9 birds, 1 amphibian, 1 reptile
ONHP List 3	3	3	2 mammals, 1 reptile
ONHP List 4	4	24	5 mammals, 16 birds, 1 amphibian, 2 reptiles

\*Special Status Species is an umbrella term that applies to all of the above species designations. Refer to “Special Status Species” in the Glossary for a complete description of these designations.

\*\*ONHP=Oregon Natural Heritage Program

**List 1** contains taxa that are threatened with extinction or presumed to be extinct throughout their entire range.

**List 2** contains taxa that are threatened with extirpation or presumed to be extirpated from the state of Oregon.

**List 3** contains species for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.

**List 4** contains taxa which are of conservation concern but are not currently threatened or endangered.



**Table 8.1b - Special Status Species List for the Klamath Falls Resource Area**

<u>Species (Common Name)</u>	<u>Scientific Name</u>	<u>BLM Status</u>	<u>Federal Status</u>	<u>State Status</u>	<u>ONHP Status</u>
<b><u>Mammals</u></b>					
American Marten	<i>Martes americana</i>	BTO		SV	4
Long-eared Myotis	<i>Myotis evotis</i>	BT	SoC	SU	4
Long-legged Myotis	<i>Myotis volans</i>	BT	SoC	SU	4
Pallid Bat	<i>Antrozous pallidus</i>	BT		SV	3
Silver-haired Bat	<i>Lasionycterus noctivagans</i>	BTO	SoC	SU	4
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	BSO	SoC	SC	2
Western Gray Squirrel	<i>Sciurus griseus</i>	BTO		SU	3
Yuma Myotis	<i>Myotis yumanensis</i>	BTO	SoC		4
<b><u>Birds</u></b>					
Acorn Woodpecker	<i>Melanerpes formicivorus</i>	BT	SoC		4
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	SEO		LE	2
American White Pelican	<i>Pelecanus erythrorhynchos</i>	BAO*		SV*	2*
Bald Eagle	<i>Haliaeetus leucocephalus</i>	LT	LT	LT	2
Black Tern	<i>Chlidonias niger</i>	BT*	SoC*		4*
Black-backed Woodpecker	<i>Picoides arcticus</i>	BSO		SC	4
Black-throated Sparrow	<i>Amphispiza bilineata</i>	BTO		SP	2
Bufflehead	<i>Bucephala albeola</i>	BAO*		SU*	4*
Flammulated Owl	<i>Otus flammeolus</i>	BSO		SC	4
Ferruginous Hawk	<i>Buteo regalis</i>	BSO*	SoC*	SC*	2*
Great Gray Owl	<i>Strix nebulosa</i>	BT*		SV*	4*
Greater Sandhill Crane	<i>Grus canadensis tabida</i>	BTO*		SV*	4*
Lewis's Woodpecker	<i>Melanerpes lewis</i>	BSO	SoC	SC	4
Merlin	<i>Falco columbarius</i>	BAO*			2*
Mountain Quail	<i>Oreortyx pictus</i>	BTO	SoC	SU	4
Northern Goshawk	<i>Accipiter gentilis</i>	BSO	SoC	SC	2
Northern Spotted Owl	<i>Strix occidentalis caurina</i>	LT	LT	LT	1
Olive-sided Flycatcher	<i>Contopus cooperi</i>	BTO	SoC	SV	4
Pileated Woodpecker	<i>Dryocopus pileatus</i>	BT		SV	4
Pygmy Nuthatch	<i>Sitta pygmaea</i>	BTO		SC/SV	4
Swainson's Hawk	<i>Buteo swainsoni</i>	BT*		SV*	4*
Tricolored Blackbird	<i>Agelaius tricolor</i>	BAO*	SoC*	SP*	2*
Western Sage Grouse	<i>Centrocercus urophasianus phaios</i>	BAO	SoC	SV	1
White-headed Woodpecker	<i>Picoides albolarvatus</i>	BSO	SoC	SC	4
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>	BTO		SU	4
Willow Flycatcher	<i>Empidonax traillii</i>	BT	SoC	SU	4
Yellow Rail	<i>Coturnicops noveboracensis</i>	BSO	SoC	SC	2
<b><u>Amphibians</u></b>					
Cascades Frog	<i>Rana cascadae</i>	BT	SoC	SV	2
Oregon Spotted Frog	<i>Rana pretiosa</i>	FC	C	SC	1
Western Toad	<i>Bufo boreas</i>	BT		SV	4
<b><u>Reptiles</u></b>					
California Mountain Kingsnake	<i>Lampropeltis zonata</i>	BT	SoC	SV	3
Common Kingsnake	<i>Lampropeltis getula</i>	BTO	SoC	SV	2
Northern Sagebrush Lizard	<i>Sceloporus graciosus graciosus</i>	BTO	SoC	SV	4
Northwestern Pond Turtle	<i>Clemmys marmorata marmorata</i>	BSO	SoC	SC	1
Sharptail Snake	<i>Contia tenuis</i>	BT		SV	4

\* Indicates listing only if breeding population



## Special Status Species - Plants

Approximately 26,740 acres of systematic inventory for botanical resources were conducted on the resource area during FY 2003. Several new sites of special status species were found, including one site of disappearing monkey flower (*Mimulus evanescens*), a Bureau Sensitive species new for the resource area. Two additional small populations of Baker's globe mallow (*Iliamna bakeri*) were also documented. Twenty-two patches of another Bureau Sensitive species, green-flowered ginger (*Asarum wagneri*), were also found. Inventory was accomplished with both BLM resource specialists, and consultants through an IDIQ contract with a multiple award to three contractors.

**Table 8.1c - BLM (KFRA) Special Status Species Designations Summary - Plants**

<u>Designation</u>	<u>Code</u>	<u># of species (sites)</u>	<u># of species/taxa group</u>
Federally Endangered	FE	0	
Federally Threatened	FT	0	
Federally Proposed	P	0	
Federal Candidate	C	0	
BLM Sensitive	BS	7 (163)	7 vascular plant species
BLM Assessment	BA	0	
BLM Tracking	BT	7 (111)	1 fungi, 1 lichen, 5 vascular plant species
Survey and Manage	SM	11 (38)	10 fungi, 1 vascular plant species

## Other Species of Concern

This category includes other species that have received special tracking emphasis on the resource area.

### Northern Goshawk and Other Accipiters

In 2003, pre-disturbance surveys were conducted for Northern Goshawks within future timber sale units that contain suitable habitat. Known goshawk nests are monitored for occupancy, nesting, and reproductive success. Eleven historic goshawk nest sites were monitored and three of these nest sites produced young. In addition, two new nest sites were found and both produced young. Cooper's Hawk and Sharp-shinned Hawk historic nest sites were visited in multiple areas.

### Forest Carnivores

In 2003, 16,320 acres of Fremont National Forest land, 2,880 acres of Klamath Falls Resource Area BLM land, and 2,400 acres of intermingled private land were surveyed to determine the presence of Marten (*Martes americana*), Fisher (*Martes pennanti*), Wolverine (*Gulo gulo*), Lynx (*Lynx canadensis*), and other forest carnivore species within the Gerber watershed as part of the Gerber Watershed Carnivore Survey. A total of nine carnivore species were detected using photographic bait stations and snow track surveys. No target species were detected.

### Herptiles

During the FY 2002 field season, the first year of a two-year Herpetological Inventory of the Gerber Watershed was conducted. The inventory was not conducted in FY 2003, but will likely continue in the future as a result of the recent proposal to raise Gerber Dam.

### Sage Grouse

This species is ranked as a BLM species of special concern and is being considered for listing under the Endangered Species Act. KFRA continued monitoring five historic lek sites in FY

2003. No birds were seen using the lek sites. Potential habitat improvement projects around these historic lek sites were designed during 2003. Historic lek sites will continue to be monitored, especially in those areas that habitat improvement treatments are conducted.

## Neotropical Migratory Landbirds

Baseline surveys and monitoring for landbirds is a requirement under the Upper Klamath Basin and Wood River RMP/EIS. Other sampling on the resource area is being conducted to collect baseline data on presence/absence and trends of bird species in grazing allotments, within habitats where there are management concerns or threats, or for projects such as the relicensing of the hydropower operations on the Klamath River.

Other umbrella documents that recommend landbird surveys within certain priority habitats are published by Partners in Flight, and include *"Management, Research and Monitoring Priorities for the Conservation of Neotropical Migratory Landbirds that Breed in Oregon"*, and *"Birds in a Sagebrush Sea: Managing Sagebrush Habitats for Bird Communities"*.

1. Continued the project work under cooperative agreement with the Klamath Bird Observatory and the Pacific Southwest Research Station of the U.S. Forest Service. Partners in this project included the World Wildlife Fund, Winema National Forest, Klamath Basin National Wildlife Refuge, and Point Reyes Bird Observatory. Demographic stations are set up in riparian areas in the Klamath River Canyon within the boundaries of the J.C. Boyle Hydropower Project, in grazing allotments, and other areas of concern, including portions of the Wood River Wetland. This data will also be used for BLM's evaluation of the FERC relicensing of the power project on the Klamath River and grazing allotments. Data from this study is in the analysis phase.

2. In cooperation with the Klamath Bird Observatory, BLM continued its landbird study in habitats including sagebrush, juniper/sage, old growth juniper, and juniper/ponderosa pine. A total of 144 point count stations were sampled within these habitats. A minimum of 11 stations were set up in each unit. In addition, general information on plant species composition was gathered using the releve' method at all of the sampling sites. The objectives of the study are to evaluate the condition and trends within these habitat types and to help evaluate management actions related to juniper harvest treatments.

3. In 2003, landbird surveys were conducted in Fuel Treatment Zone Units following treatment with a total of 116 stations sampled and a minimum of 10 stations set up in each unit. The majority of the units sampled for birds were in juniper and juniper/shrub habitats. In addition, general information on plant species composition was gathered using the releve' method at all of the sampling sites.

## Terrestrial Habitat Management

For a narrative discussion of specific habitat elements (such as Green Tree Retention, Snag Recruitment, and Coarse Woody Debris) refer to the Monitoring Report portion of this document, specifically the Matrix Implementation Monitoring section. See also Table 8.2.

**Table 8.2 - Terrestrial Habitat Monitoring Fiscal Year 2003**

<u>Type of Monitoring</u>	<u>Number of acres</u>
Green Tree Retention Monitoring (acres)	1,679
Snag Monitoring (pre-harvest acres/post-harvest acres)	360/1,219
Number of Snags Created	None
Coarse Woody Debris Monitoring (pre-harvest acres/post-harvest acres)	360/1,219
Pre-commercial thinning (acres)	188
Commercial thinning (acres)	None



## Nest Sites, Activity Centers, and Rookeries

### Northern Spotted Owl and Bald Eagle

See discussion under Threatened and Endangered Species. Refer also to Table 8.3.

### Golden Eagle

Of five historic nest territories monitored this year, two were occupied. Seasonal restrictions and distance buffers were applied to proposed activities in the vicinity of Golden Eagle nest sites.

### Osprey

Historic nest sites were checked for occupancy and nesting. Of the 16 nest locations checked, 12 sites were active with Osprey incubating. The remaining sites were unoccupied.

**Table 8.3 - Monitoring for Nest Sites, Activity Centers, Rookeries, Special Habitats (FY 2003)**

<u>Name of species</u>	<u>Unit monitored</u>	<u>Number units monitored</u>	<u>Result</u>	<u>Number new units built</u>
Western Sage Grouse	Historic Leks	5	0 occupied	N/A
Northern Goshawks	Historic Nests	11	3 occupied	0
	New Nests	2	2 occupied	N/A
Osprey	Historic Nests	16	12 occupied	0
Bald Eagles	Historic Nests	20	15 occupied	0
	Winter Roosts	4		0
Golden Eagles	Historic Nests	5	2 occupied	0
Waterfowl	Acres	3000	3100 young produced	0
Great Grey Owls	Activity Centers	3	No nests found	-
	Nest Structures	20	0 occupied	0
Northern Spotted Owl	Nest Territories	16	8 occupied	0
Peregrine Falcon	High Potential Nest Sites	4	0 occupied	0

## Big Game Habitat

Cooperative road closures continue to be maintained for deer, elk and other big game management both on the Eastside and the Westside of the resource area. Gates and other closures continue to be maintained. Additional road closures are planned in future years to reduce open road density closer to the management goal described in the RMP of 1.5 miles per section.

Thermal clumps were designed into timber sales (see Timber Management section) during the layout phase in 2003 to provide adequate escape and thermal cover within the timber harvest units. This is especially important in the winter range areas.

### Elk and Mule-deer Habitat

Continued habitat improvement for big game was coordinated with the fuels reduction programs. Biologists prioritized selected fuels units and helped set objectives where the treatments could enhance big game habitat. Klamath River Canyon oak thin projects implemented in 2002 were underburned in FY 2003. Additional oak thin units have been laid out and are scheduled for treatment in FY 2004. Several juniper thinning projects were completed in winter range areas (Gerber and Willow Valley watersheds, Stukel and Bryant mountains, and South DeVaul). Bitterbrush and Mountain Mahogany seedlings were outplanted into Willow Valley, Windy Ridge and Short Lake fuel treatment units. Native grasses were seeded in Windy Ridge and Boundary Springs units.



In addition, meadow areas with invasive juniper were treated. This improved the meadow habitat for big game, Great Gray Owls and landbirds.

## 9.0 Aquatic Species and Habitat Management

During Fiscal Year (FY) 2003, the resource area employed two fisheries biologists. The biologists conducted extensive planning and consultation on multiple projects in the resource area including but not limited to the Klamath River Management Plan EIS, Wood River Restoration Project (see Wood River section), Spencer Creek channel treatments and Pitchlog Creek. One mile of Pitchlog Creek and 6 miles of Spencer Creek were inventoried and planned for treatment in FY 2004. (Refer to Table 9.1 for information on aquatic habitat and fish passage.) Serber samplers, ocular verification, hook and line, Wolman pebble counts and longitudinal channel profiles were utilized to monitor fisheries/aquatic resources for FY 2003.

**Table 9.1 - Aquatic Habitat / Fish Passage Management Fiscal Year 2003**

Instream Fish Habitat Improvement (miles of stream treated)	0
Fish Passage protected/improved - total miles of stream benefited	1
Dams removed	0
Irrigation diversions	1
Culverts inventoried	40
Culverts removed/built/upgraded	0
Flumes created	0
Riparian Fish Habitat Improvement (acres treated/stream miles within area)	15 acres/ 0.25 miles
Roads Improved, drainage, upgrades, stabilization, relocation (miles)	1.2
Roads decommissioned (miles)	1.1
Freshwater wetlands created/maintained/restored (acres)	3,200
Coastal Estuary wetlands created/maintained/restored (acres)	NA

## Threatened/Endangered Species

### Lost River and Shortnose Suckers

Lost River suckers (*Deltistes luxatus*) and Shortnose suckers (*Chasmistes brevirostris*) occupy lakes as adults and spawn in streams during the spring and early summer. Both species spawn in the Wood River and are thought to spawn in the Wild & Scenic section of the Klamath River in the resource area. The Wood River and Four Mile Creek are designated as proposed critical habitat for both species even though suckers are not currently found in Four Mile Creek. Four Mile Creek is historic habitat and the BLM portion of the stream is in properly functioning condition. Fish cannot enter the stream because of downstream barriers. The tributaries to Gerber Reservoir are proposed critical habitat and contain shortnose suckers. Miller Creek is proposed critical habitat for both sucker species and may contain populations of both species.

Work was completed on the channel realignment in the mainstem of Wood River in FY 2002. The last of the sheet piling material for bank protection, was removed from the mainstem of the Wood River channel in August. Construction of the Wood River fish screen was completed in FY 2003. Screening the diversion water will prevent entrainment of listed suckers to the inner wetland cells of the project. The screen will be functional in the FY 2004.

The BLM continues to work with ODFW, Tribal Biologists, Klamath fishing guides, and other resource management organizations to coordinate a fish-monitoring program in Upper Agency Lake that would meet fisheries monitoring objectives.

Tributaries to Gerber Reservoir were surveyed for spawning shortnose suckers at least four times from March through June in 2003. The tributaries checked were Pitchlog Creek, Barnes Valley Creek, Long Branch Creek, Miller Creek, and Ben Hall Creek. There were two sample locations in Barnes Valley Creek; upper and lower Barnes Valley Creek. The surveys included visually identifying spawning adults and ocular sampling for larvae. Occurrence of spawning (presence of adults, larvae, or eggs) was documented in Barnes Valley Creek (upper and lower), Ben Hall Creek, and Pitchlog Creek in FY 2003.

## **Bull Trout**

The resource area does not currently administer lands known to contain bull trout (*Salvelinus confluentus*) populations. The presence of bull trout is suspected within the Demming Creek Drainage, specifically Demming Creek Ditch and Cambell Reservoir, of the South fork Sprague River Watershed. Demming Creek Ditch and Cambell Reservoir are largely on BLM administered lands. Past surveys by BLM staff of these water bodies has not located listed bull trout.

In early FY 2003, the USFWS proposed critical habitat for bull trout (50 CFR 17) including the Klamath Basin (Unit i). The BLM administers lands which include proposed critical habitat for bull trout in Upper Klamath Lake (subunit 1) and Sprague River (subunit iii). However, bull trout are not currently known to occupy stream reaches within BLM administered lands. No surveys were conducted by BLM staff for bull trout in FY 2003.

## **Endangered Species Act Consultation**

Consultation is being continued on individual projects that have the potential to affect endangered suckers. The resource area contains critical habitat for both species of suckers. The proposed critical habitat administered by the BLM for the listed sucker species is predominantly on the Eastside of the resource area. There is also limited critical habitat administered by the BLM for endangered sucker species on the Westside of the resource area, mostly the mainstem of the Klamath River.

## **Aquatic Habitat Restoration**

Road activities to improve water quality continue to be a focus of the resource area where possible. In FY 2003, a road sedimentation study was continued in the Gerber watershed (see Water and Soils Monitoring section). This study is expected to identify key road features (physical and geographical) that should be targeted for improvement, and improve road management to reduce future sediment runoff.

Road obliteration and road improvement occurred in the Gerber Watershed, in FY 2003. Approximately 1.33 miles of road was treated to reduce sediment reaching stream channels in proposed critical habitat for suckers.

Project planning for restoration of Spencer Creek continued in FY 2003. Proposed instream actions may include rock weirs, log structures, bankfull bench treatments, and riparian vegetation enhancement. Environmental analysis for the proposed replacement of the Spencer Creek Culvert was initiated in FY 2003 with expected completion in FY 2004. The proposed replacement structure would be designed to simulate natural stream characteristics through the crossing.

## **Klamath River Hydroelectric Facility Relicensing**

Resource Area staff continued consultation with multiple state, federal, and tribal agencies for the Upper Klamath River [Wild and Scenic River] Management Plan Environmental Impact Statement (River Plan EIS). The River Plan EIS will amend the Klamath Falls Resource Area



Record of Decision and Resource Management Plan (1995). The federally listed Lost River sucker, shortnose sucker, and coho salmon may be affected by the proposed plan amendment; therefore, informal consultation with the USFWS and National Marine Fisheries Service (NMFS) is currently ongoing.

Resource area staff have coordinated with state, federal, and tribal agencies on the proposed relicensing of the PacifiCorp Klamath River Project (FERC License 2082). Listed species within the project area (Lost River and shortnose suckers) as well as listed species below the project (coho salmon) are potentially affected by this project. Resource area staff are consulting with the USFWS and the NMFS on project impacts affecting BLM administered lands.

## 10.0 Pathogen, Disease, and Pest Management

At present there are no serious, large-scale pest problems like Sudden Oak Death or Swiss Needle Cast on the Resource Area. However, this situation can change with environmental conditions, especially with forest insects. Endemic levels of insects such as fir engraver, western pine beetle, and mountain pine beetle that exist on the resource area can explode to epidemic levels during prolonged droughts when host trees are stressed and vulnerable.

## 11.0 Weed Management

The objective of the noxious weed management program in the Klamath Falls Resource Area is to contain or reduce noxious weed infestations using an integrated pest management approach. Integrated pest management includes manual, mechanical, chemical, and biological control methods which are used in accordance with the Klamath Falls Resource Area Integrated Weed Control Plan (IWCP) and Environmental Assessment (EA)(OR-014-93-09), which is tiered to the Northwest Area Noxious Weed Control Program Environmental Impact Statement (EIS) (December 1985) and Supplement (March 1987).

### Inventories

The Klamath Falls Resource Area continues to survey BLM-administered land for noxious weeds by including noxious weeds in project clearance surveys, and through systematic inventories conducted through contracts. During FY 2003, approximately 26,740 acres of systematic inventory for noxious weeds was conducted on the resource area. Noxious weed species with new populations found included Dalmatian toadflax (*Linaria dalmatica*), Musk thistle (*Carduus nutans*), Canada thistle (*Cirsium arvense*), and Mediterranean sage (*Salvia aethiopsis*). Inventory was accomplished with both BLM resource specialists and consultants through an IDIQ contract with a multiple award to three contractors.

### Control

Two hundred-fifty noxious weed infested sites covering approximately 110 acres spread over approximately 280 acres of BLM lands were chemically and manually treated by the Oregon Department of Agriculture (ODA) noxious weed treatment crew supervised by the ODA weed management specialist according to the annual operations plan and resource area priorities. Approximately 54,000 individuals of one species of biological control organisms were released on or near BLM lands on five populations of one target species of noxious weeds (Table 11.1).



**Table 11.1 - Weed Management Fiscal Year 2002**

<u>Name of species (common name)</u>	<u>Treatment Type</u>	<u>FY 2003</u>	<u>FY95-03**</u>
<i>Acroptilon repens</i> (Russian knapweed)	Chemical	0	0.8
<i>Cardaria draba</i> (hoary cress)	Chemical	0.2	1.6
<i>Carduus nutans</i> (musk thistle)	Chemical	40	248
	Biological	0	10
<i>Centaurea diffusa</i> (diffuse knapweed)	Chemical	10	44
	Biological	0	5
<i>Centaurea maculosa</i> , (Spotted knapweed)	Biological	0	15
	Chemical*	6	6
<i>Centaurea solstitialis</i> (yellow starthistle)	Manual	1	8
	Chemical	90	658
	Biological	0	200
<i>Cirsium arvense</i> (Canada thistle)	Chemical	30	87
	Biological	0	5
<i>Cytisus scoparius</i> (Scotch broom)	Manual	0.1	0.8
<i>Euphorbia esula</i> (leafy spurge)	Chemical	35	245
	Biological	25	85
<i>Hypericum perforatum</i> , (St. John's wort)	Chemical	5	11
<i>Isatis tinctoria</i> (dyer's woad)	Chemical	0.2	0.7
<i>Linaria genistifolia</i> spp. <i>dalmatica</i>	Chemical	9	30
(Dalmatian toadflax)	Biological	0	15
<i>Onopordum acanthium</i> (Scotch thistle)	Chemical	38	230
<i>Salvia aethiopsis</i> (Mediterranean sage)	Chemical	12	65
<i>Senecio jacobaea</i> (tansy ragwort)	Chemical	2	16
<i>Xanthium spinosum</i> (Spiny clotbur)	Manual	0.2	0.65
<b>TOTAL:</b>		<b>303.7</b>	<b>1,987.55**</b>

\*FY 2002 - first year to manage in Resource Area

\*\*Totals for previous years include repeat treatments on most areas.

## 12.0 Special Areas/Management

### Wild and Scenic Rivers

The upper Klamath River is designated as a Wild and Scenic River in the national Wild and Scenic river system. The designated river in the resource area, is an 11-mile segment, extending from just below the J.C. Boyle powerhouse to the Oregon-California state line. This same portion of the river is designated as an Area of Critical Environmental Concern (ACEC). Refer to the following discussion. Wild and Scenic rivers are to be managed to protect their outstandingly remarkable values (ORVs) and to maintain and enhance the natural integrity of river related values. All proposed management actions, or commercial activities, in the Wild and Scenic river corridor, are evaluated by Resource Area specialists to ensure that the ORVs are not degraded. If there are impacts associated with a project, adequate mitigation must be included to maintain or enhance resource values.

The upper Klamath River is quite popular for summer recreation, particularly whitewater rafting, camping, and fishing. In FY 2003, approximately 3,500 people floated the upper Klamath in rafts and kayaks, the majority of them traveled with one of the 20 commercial guides and outfitters permitted by the BLM. BLM recreation staff provided visitor assistance at the Spring Island launch site on every weekend from mid June through mid September.

River rangers conducted approximately 14 river patrols by raft to provide visitor assistance, monitor resource conditions, and maintain remote recreation sites along the river.

BLM recreation staff meets periodically with upper Klamath River outfitters and guides, and staff members from PacifiCorp that operates the hydroelectric plants above and below the designated Wild & Scenic segment. In FY 2003, a preseason meeting was held in April to coordinate management activities, and included discussions regarding the timing, volume, and duration of water releases during the peak rafting season.

Prescribed burns were implemented on four areas in FY 2003 on the parcels of oak-woodland thinning within the river corridor. A short section of Topsy Road adjacent to a meadow in the Kerwin Ranch area was reconstructed to reduce erosion and improve the condition of the meadow. In addition, several volunteers/organizations helped build a fence to enclose the meadow to reduce damage from off-highway vehicles.

A draft river management plan/Environmental Impact Statement effort was initiated in FY 2000 for the Klamath River in Southern Oregon and Northern California. The draft Upper Klamath River Management Plan/EIS, released for public comment in April 2003, addressed options for managing the outstandingly remarkable values and the ACEC values. The final UKRMP/EIS is expected to be released in FY 2005.

## **Wilderness**

There is one Wilderness Study Area (WSA) in the Klamath Falls Resource Area, the Mountain Lakes WSA. There are 334 acres within the WSA boundary. The WSA borders the eastside of the Mountain Lakes Wilderness Area. The WSA is managed under the interim wilderness management policy to protect its wilderness values. Interim protection measures include routine patrols, monitoring and restriction of vehicles to existing roadways.

## **Areas of Critical Environmental Concern**

The Klamath Falls Resource Area has five Areas of Critical Environmental Concern (ACEC) and Research Natural Areas (RNA) totaling approximately 12,140 acres; three Special Botanical/Habitat Areas totaling 570 acres; and two Environmental Education Areas totaling 180 acres. One additional area has been proposed as an ACEC, which is 1,196 acres in size. Table 12.1 lists all Special Areas in the resource area. Only those special areas that received some specific management activities in FY 2002 are discussed below.

### **Klamath Canyon ACEC**

Management of the Klamath Canyon ACEC was addressed in the Draft Upper Klamath River Management Plan and Environmental Impact Statement, released for public comment in April 2003. The draft River Plan/EIS evaluated the expansion of the existing ACEC (from J.C. Boyle Powerhouse to J.C. Boyle Dam). The final River Plan/EIS will be completed in FY 2005.

### **Old Baldy Research Natural Area**

A prescribed fire originally planned for FY 2000 in the Frosty Too timber sale was implemented in 2003. The fire was allowed to burn into the Old Baldy RNA/ACEC. The Old Baldy RNA was designated for the shrub community, dominated by snow brush and manzanita. Up to 400 acres was burned within the RNA. Prescribed fire effects monitoring plots were established in 1999 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program (ONHP). Data from a sub-sample of the plots were collected in 2001 to verify the validity of that pre-burn data. Additional prescribed fire effects monitoring plots were



established in the fall of 2001 to measure dead and downed fuel loads before the burn. In the summer of 2002, vegetation transects were installed at 10 locations to describe cover of species. Nine stand exams were installed to get pre burn data on tree condition and age. Post-burn data were collected on all of the plots in FY 2003.

## **Wood River Wetland ACEC**

Activities occurring on the 3,200 acre Wood River Wetland located in the Klamath Falls Resource Area are guided by a separate management plan entitled Upper Klamath Basin and Wood River Wetland RMP/EIS, completed in July of 1995. Restoration work at the wetland is coordinated with several partners, including the Klamath Tribes.

A monitoring report, specific to the Wood River Wetland, is prepared annually and distributed in March. Copies of this report are available on request, or may be viewed at [www.or.blm.gov/lakeview/planning/kfplans/WR-4mile/wrnet.htm](http://www.or.blm.gov/lakeview/planning/kfplans/WR-4mile/wrnet.htm).

## **FY 2003 Wood River Accomplishments**

### Planning

- Completed and distributed the 2002 Monitoring Report; also collected 2003 data, as appropriate.

### Funding

- Klamath Tribes and the Klamath Basin Rangeland Trust monitored water quality and contributed to cultural resource survey.
- USGS continued groundwater monitoring (\$20,000).

### Tours/Presentations

- Chiloquin Elementary School
- OIT (Oregon Institute of Technology) applied environmental sciences class
- Roosevelt Elementary School Third Grade Wetland Discovery Day
- Oregon Chapter of the Wildlife Society
- Herald and News staff
- Ducks Unlimited biologists
- Klamath Community College Environmental Studies
- International Erosion Control Board
- DOI Conference on the Environment
- Hatfield Upper Klamath Basin Working Group
- Klamath county Flycasters
- Klamath County Guides Association
- Humboldt State University President and Staff
- National Public Lands Day
- Klamath County Commissioners and Congressman Walden's staff

### Project Implementation

- Completed cultural resource surveys for planned construction areas.
- Completed eighth year of monitoring.
- Installed two hunter access crossings.
- Installed 20 birdhouses.
- Completed 80 percent of the fish screen construction.
- Transplanted wetland plants on 2 acres.

## **FY 2004 Planned Projects**

- Complete fish screen installation on Seven Mile canal diversion structure.
- Surface rock on dike road from Wood River Bridge to the fish screen.
- Install floating boardwalk, interpretive signs, restroom, trail system and group interpretive site.



- Continue nutrient study in cooperation with USGS.
- Continue cooperative fish monitoring with ODFW and Klamath County Guides Association.



Wood River Wetland - "Beauty and Solitude", photograph by Kelly Hollums

## Environmental Education Areas

The Klamath Falls Resource Area contains two Environmental Education Areas that total approximately 180 acres. Interpretive education uses at the Clover Creek and Surveyor Forest Environmental Education Areas receive substantial numbers of local visitors each year.

**Table 12.1 - Special Areas Management Fiscal Year 2003**

<u>Name of Area</u>	<u>Designation</u>	<u>Status</u>	<u>Acres</u>	Management
				<u>Plan Completed</u>
Klamath Canyon	ACEC	Designated	5,700	In progress
Wood River Wetland	ACEC	Designated	3,200	Completed 1996
Miller Canyon	ACEC	Designated	2,000	No
Yainax Butte	ACEC	Designated	720	No
Fourmile Creek	ACEC	Proposed	1,196	No
Old Baldy	RNA	Designated	520	No
Bumpheads	Special Botanical Area	Designated	50	No
Tunnel Creek	Special Botanical Area	Designated	280	No
Alkali Lake	Special Habitat Area	Designated	240	No
Clover Creek	Environmental Education Area	Designated	30	No
<u>Surveyor Forest</u>	Environmental Education Area	Designated	<u>150</u>	No
<b>TOTAL</b>			<b>14,086</b>	

## 13.0 Cultural Resources

The cultural resource program identifies and manages cultural resources on BLM administered lands. This program ensures that the BLM complies with federal and state law governing cultural resources preservation and works with the State Historic Preservation Officer to enhance the management of cultural resources under the BLM's jurisdiction. Primary responsibilities include performing archaeological inventories prior to implementing projects with the potential to impact cultural resources, and consulting with Tribes as per Section 106 of the National Historic Preservation Act (NHPA).

Surface inventories were conducted to BLM Class III standards. Class III inventory is a continuous, intensive survey of an entire target area by walking close interval transects (<30 meters) until the area has been thoroughly examined, aimed at locating and recording all archaeological properties that have surface indication. FY 2003 surveys were completed by an in-house Archaeologist, an Archaeological Technician, and one Apprenticeship in Science and Engineering (ASE) student. A total of 70 acres were surveyed in-house.

As a sponsor for the ASE program, the BLM helps high school students find their career paths and gain work experience. The ASE student, Jessica Palmer from Oregon City High School in Oregon City, learned how the BLM manages archaeological and cultural resources to protect against inadvertent loss, destruction, or impairment. She helped the archaeology crew survey selected areas to identify, record, and protect cultural resources from potential ground disturbing activities and developed map reading, orientation and Global Positioning System skills.

An additional 15,284 acres were inventoried by two contractors prior to fuels reduction project implementation. The history of inventory activities on the Resource Area is displayed in Table 13.1.

**Table 13.1 - Cultural Resources Management Fiscal Year 2003**

	<b>FY 03</b>	<b>FY95-03</b>
Number of sites evaluated	0	0
Acres inventoried	15,354	89,609
Number of archaeological sites discovered	84	549
Sites nominated to National Registry of Historic Places	0	0

## 14.0 Visual Resources

Project proposals within the Klamath Falls Resource Area were reviewed to assure that proposed activities would meet designated visual resource management (VRM) classes.

## 15.0 Rural Interface Areas

Projects planned in rural interface areas have involved extra planning efforts to gather input and inform the residents of those areas about the proposed projects. The resource area has one large (Klamath Forest Estates) and two small (Harpold Dam and Grenada Butte) rural interface areas (RIAs). The area around Stukel Mountain is being considered for an RIA because of increasing population.



The Bly Mountain Timber Sale (Klamath Forest Estates) was sold and awarded in 1999. Extreme fire danger in the summer of 2001 and 2002 forced BLM to suspend logging of the Bly Mountain Timber sale and grant the purchaser another one-year extension to complete the logging. The purchaser completed the sale in the fall of 2003. Approximately 650 acres of hand cutting and piling of slash in the Bly Mountain Timber Sale has been completed. The BLM proposes to burn the hand piles in FY 2004.

## 16.0 Socioeconomic Conditions

The Klamath Falls Resource Area contributes to local, state, national and international economies through monetary payments, sustainable use of BLM-managed lands/resources, use of innovative contracting/implementation strategies, and providing amenities such as recreational facilities/opportunities and fish/wildlife habitat to enhance the local community as a place to live, work, and visit. One of the ways the Bureau of Land Management contributes directly to local economies is through monetary payments including: Payments in Lieu of Taxes, O&C Payments, and Coos Bay Wagon Road (CBWR) Payments. Payments of each type, described below, were made in FY 2003 as directed in current legislation.

“Payments in Lieu of Taxes” (or PILT) are Federal payments made annually to local governments that help offset losses in property taxes due to nontaxable Federal lands within their boundaries. The key law that implements the payments is Public Law 94-565, dated October 20, 1976. This law was rewritten and amended by Public Law 97-258 on September 13, 1982 and codified at Chapter 69, Title 31 of the United States Code.

PILT payments help local governments carry out such vital services as firefighting and police protection, construction of public schools and roads, and search-and-rescue operations. These payments are one of the ways that the Federal government can fulfill its role of being a good neighbor to local communities. This is an especially important role for the BLM, which manages more public land than any other Federal agency. The specific amounts of PILT payments to counties in FY 2003 are displayed in Table 16.1.

Payments to counties are currently made under *“The Secure Rural Schools and Community Self-Determination Act of 2000.”* The purpose of the act is *“To restore stability and predictability to the annual payments made to States and counties containing National Forest System lands and public domain lands managed by the BLM for use by the counties for the benefit of public schools, roads and other purposes.”* For the purpose of this act, the public domain lands managed by the BLM refers to Oregon and California Revested Grantlands (O&C) and Coos Bay Wagon Road Lands (CBWR). The O&C lands include approximately 2.5 million acres of federally-owned forest lands in 18 western Oregon counties and 74,500 acres of Coos Bay Wagon Road Lands in the Coos Bay and Roseburg BLM Districts.

Fiscal Year 2003 was the third year that payments were made to western Oregon counties under the Secure Rural Schools and Community Self-Determination Act of 2000 (P.L. 106-393). Counties made elections to receive the standard O&C and CBWR payment as calculated under the Act of August 28, 1937 or the Act of May 24, 1939, or the calculated full payment amount as determined under P.L. 106-393. Klamath County elected to receive payments under the new legislation. Beginning in Fiscal Year 2001 and continuing through 2006 payments are to be made based on historic O&C payments to the counties. Table 16.2 displays the statewide payments made under each Title of P.L. 106-393 as well as the grand total. Actual payments for 2003 were made October 31, 2003.

Title I payments are made to the eligible counties based on the three highest payments to each county between the years 1986 and 1999. These payments may be used by the counties in the same manner as previous 50-percent and “safety net” payments.



Title II payments are reserved for the counties in a special account in the Treasury of the United States for funding projects providing protection, restoration and enhancement of fish and wildlife habitat, and other natural resource objectives as outlined in P.L. 106-393. BLM is directed to obligate these funds for projects selected by a local Resource Advisory Committee and approved by the Secretary of Interior or her designee.

Title III payments are made to the counties for uses authorized in P.L. 106-393. These include: 1) search, rescue, and emergency services on Federal land, 2) community service work camps, 3) easement purchases, 4) forest-related educational opportunities, 5) fire prevention and county planning, and 6) community forestry.

### Jobs-in-the-Woods

The Jobs-in-the-Woods program was established to help mitigate the economic and social impacts on communities from reduced timber harvesting due to direction in the Northwest Forest Plan. This program was designed to provide jobs and incomes while investing in the ecosystem. Fiscal Year 2003 was the eighth year of this program. Projects included juniper woodland restoration, bitterbrush planting, recreation maintenance, and fuel reduction. Refer to Table 16.3 for information on the Jobs-in-the-Woods program.

**Table 16.1 - Total Payments in Lieu of Taxes and Acres by County for FY 2003**

<u>County</u>	<u>Payment</u>	<u>Total Acres</u>
Baker County	\$326,877	1,020,753
Benton County	\$3,696	20,327
Clackamas County	\$94,845	521,598
Clatsop County	\$488	359
Columbia County	\$0	1
Coos County	\$12,295	67,619
Crook County	\$170,812	939,376
Curry County	\$107,412	590,707
Deschutes County	\$260,746	1,433,965
Douglas County	\$172,317	947,655
Gilliam County	\$45,846	34,616
Grant County	\$319,996	1,751,354
Harney County	\$561,467	4,456,024
Hood River County	\$37,417	205,774
Jackson County	\$83,730	460,472
Jefferson County	\$54,021	297,088
Josephine County	\$63,659	350,091
<b>Klamath County</b>	<b>\$392,756</b>	<b>2,159,957</b>
Lake County	\$561,467	3,703,244
Lane County	\$248,931	1,368,994
Lincoln County	\$33,297	183,116
Linn County	\$86,558	476,022
Malheur County	\$1,379,451	4,302,798
Marion County	\$37,151	204,312
Morrow County	\$27,268	149,960
Multnomah County	\$13,795	75,865
Polk County	\$0	435
Sherman County	\$72,071	53,672
Tillamook County	\$16,904	92,962
Umatilla County	\$119,409	418,790
Union County	\$389,426	624,346
Wallowa County	\$212,372	1,167,805
Wasco County	\$40,188	221,016
Washington County	\$3,548	2,608
Wheeler County	\$55,365	301,926
<u>Yamhill County</u>	<u>\$4,689</u>	<u>25,790</u>
<b>Total</b>	<b>\$6,010,270</b>	<b>28,631,397</b>

**Table 16.2 - O&C Payments To Counties FY 2003**

County	Title I Paid	Title III Paid	Total Paid	Title II	Grand Total
Benton	\$2,649,253.09	\$233,757.62	\$2,883,010.71	\$233,757.62	\$3,116,768.33
Clackamas	\$5,232,510.54	\$692,538.16	\$5,925,048.70	\$230,846.05	\$6,155,894.75
Columbia	\$1,942,157.06	\$229,631.51	\$2,171,788.57	\$113,102.09	\$2,284,890.66
Coos	\$5,562,488.68	\$785,292.52	\$6,347,781.20	\$196,323.13	\$6,544,104.33
Coos (CBWR)	\$696,383.35	\$15,975.85	\$712,359.20	\$106,915.32	\$819,274.52
Curry	\$3,441,200.62	\$364,362.42	\$3,805,563.04	\$242,908.28	\$4,048,471.32
Douglas	\$23,617,007.03	\$1,041,926.78	\$24,658,933.81	\$3,125,780.34	\$27,784,714.15
Douglas (CBWR)	\$125,890.06	\$5,553.97	\$131,444.03	\$16,661.92	\$148,105.95
Jackson	\$14,773,592.81	\$1,303,552.31	\$16,077,145.12	\$1,303,552.31	\$17,380,697.43
Josephine	\$11,388,959.88	\$1,004,908.22	\$12,393,868.10	\$1,004,908.22	\$13,398,776.32
<b>Klamath</b>	<b>\$2,206,139.58</b>	<b>\$77,863.75</b>	<b>\$2,284,003.33</b>	<b>\$311,455.00</b>	<b>\$2,595,458.33</b>
Lane	\$14,396,474.94	\$1,295,682.74	\$15,692,157.68	\$1,244,871.66	\$16,937,029.34
Lincoln	\$339,406.09	\$19,969.06	\$359,375.15	\$39,926.13	\$399,301.28
Linn	\$2,488,977.98	\$219,615.71	\$2,708,593.69	\$219,615.71	\$2,928,209.40
Marion	\$1,376,480.25	\$194,326.62	\$1,570,806.87	\$48,581.66	\$1,619,388.53
Multnomah	\$1,027,646.22	\$176,349.33	\$1,203,995.55	\$5,000.00	\$1,208,995.55
Polk	\$2,036,436.53	\$323,434.04	\$2,359,870.57	\$35,937.12	\$2,395,807.69
Tillamook	\$527,965.03	\$30,746.20	\$558,711.23	\$62,424.10	\$621,135.33
Washington	\$593,960.65	\$78,612.44	\$672,573.09	\$26,204.15	\$698,777.24
<u>Yamhill</u>	<u>\$678,812.18</u>	<u>\$116,196.67</u>	<u>\$795,008.85</u>	<u>\$3,593.71</u>	<u>\$798,602.56</u>
<b>TOTALS</b>	<b>\$95,101,742.57</b>	<b>\$8,210,295.92</b>	<b>\$103,312,038.49</b>	<b>\$8,572,364.52</b>	<b>\$111,884,403.01</b>
				CBWR	\$967,380.47
				O&C	\$110,917,022.54
				<b>TOTAL</b>	<b>\$111,884,403.01</b>

**Table 16.3 - Jobs in the Woods Program Fiscal Year 2003**

<u>Job Type</u>	<u>FY 2003 Amount (\$)</u>	<u>Number jobs provided</u>	<u>FY95-03 Total (\$)</u>	<u>Total Jobs Provided</u>
Noxious Weed Inventory/Treatment	5,000	0.25	28,000	1.25
Recreation Construction/Maintenance	7,500	0.25	45,500	1.75
Juniper Woodland Restoration/Treatments	100,000	4.00	770,000	31.00
Bitterbrush Planting	60,000	2.00	166,000	6.00
Riparian Thinning	-	-	108,000	4.00
Fuel Reduction and Prescribed Burning	-	-	1,106,000	44.00
Archaeological Surveys	-	-	66,000	3.00
Riparian Fencing	-	-	13,000	0.50
Tree Planting	18,000	.75	18,000	.75
<u>Fish-Wildlife Habitat Enhancement/Restoration</u>	<u>21,000</u>	<u>1.00</u>	<u>119,000</u>	<u>5.00</u>
<b>TOTALS</b>	<b>211,500</b>	<b>8.25</b>	<b>2,439,500</b>	<b>97.25</b>



## 17.0 Environmental Justice

Executive Order 12898 of February 11, 1994, "*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*" directs all federal agencies to "...make achieving environmental justice part of its mission by identifying and addressing ...disproportionately high and adverse human health or environmental effects of its programs, policies and activities."

New projects with possible effects on minority populations and/or low-income populations will incorporate an analysis of Environmental Justice impacts to ensure any disproportionately high and adverse human health or environmental effects are identified, and reduced to acceptable levels if possible.

## 18.0 Recreation

Outdoor enthusiasts find a wide variety of recreation opportunities on the public lands managed by the Klamath Falls Field Office. Some of the more popular activities are camping, fishing, sightseeing, whitewater rafting, and birding. The resource area manages five campgrounds, a 3,200-acre wetland restoration project, river access points in the upper Klamath River canyon, and a number of dispersed, semi-developed camps.

The resource area issues and administers a number of Special Recreation Permits for activities such as guided whitewater rafting, guided hunting and fishing, and special events (Table 18.1).

**Table 18.1 - Recreation Statistics Fiscal Year 2003**

	<u>FY 2003</u>	<u>FY95-03 (Total)</u>	<u>FY95-03 (Average)</u>
Number of Recreation Visits	162,000	1,443,000	160,333
Campground Permits Issued	1,140	11,086	1,232
Campground Fees Collected	\$8,400	\$78,000	\$8,667
Pavilion Use Permits Issued		Not Applicable	
Pavilion Use Fees Collected		Not Applicable	
Number of Special Recreation Permits	25	240	27
Special Recreation Permits Fees Collected	\$12,600	\$130,800	\$14,535
Total hours volunteered	4,615	69,715	7,746
Total value volunteer work	\$62,256*	\$905,856	\$100,651

\*Value of volunteer hours in FY 2003 are based on an hourly pay rate of a GS-7, Step 1 employee - \$13.49/hr.

## Recreation Pipeline Restoration Funds

This Congressional funding was appropriated for the completion of backlogged recreation projects in western Oregon, including BLM managed lands in Klamath County. The intent of this funding is to do facility or site backlog maintenance at existing recreation sites. New construction of recreation projects that address critical visitor safety or recreation management needs are also prioritized. During FY 2003, the fifth year of this funding, the Klamath Falls Resource Area received \$71,000 for completion of the Willow Valley Reservoir recreation project in the south end of the Gerber Block. The facility includes a concrete boat ramp, parking for 15-20 vehicles and trailers, a vault toilet, and day use picnic



sites. The project received Oregon State Marine Board grant funding in the amount of \$13,800 and was sponsored by the Klamath County Parks Department. Pipeline funding was also used to support the chip sealing project in front of the Topsy Recreation Site and investigating the suitability of drinking water at Topsy Well.

## **Recreation Projects**

### **Gerber Recreation Site**

#### **FY 2003 Projects Completed**

1. Replaced ten damaged or worn picnic tables and installed vehicle barriers.
2. Installed information sign boards at each campsite.
3. Initiated layout and design for Miller Creek-Potholes trail.

#### **FY 2004 Projects Planned**

1. Begin construction of Miller Creek-Potholes trail.
2. Remove hazard trees in campgrounds.

### **Wood River Wetland**

#### **FY 2003 Projects completed**

1. Planted landscape trees in gathering area for environmental education.
2. Repaired and extended canal crossing.

#### **FY 2004 Projects Planned**

1. Complete design for the second phase of the interpretive display project.
2. Complete planning and design for a gathering and staging area for environmental education activities and wetland presentations.
3. Install new interpretive displays.

### **Upper Klamath River**

#### **FY 2003 Projects Completed**

1. Maintained existing facilities.
2. Installed signs and a fire ring at designated camp site.
3. Reconstructed and graveled Topsy Road at Kerwin Ranch Meadow.
4. Installed fence and barrier to limit OHV access to the Kerwin Ranch Meadow.

#### **FY 2004 Projects Planned**

1. Maintain existing facilities.

### **Topsy and Surveyor Recreation Sites**

#### **FY 2003 Projects Completed**

1. Installed boat ramp area lighting.
2. Chip sealed Topsy road in front of campground.
3. Investigated well for drinking water suitability.
4. Installed fire ring at Surveyor Campground.
5. Hazard tree removal at Topsy Campground.

#### **FY 2003 Projects Planned**

1. Develop plans and issue contract for extending Topsy boat ramp.
2. Purchase and install components for water hauling and storage at Topsy Campground.

## Recreation Fee Demonstration Project

Prior to 1998, all recreation fees were combined with other revenue sources from public O&C lands and allocated between the U.S. Department of the Interior and the O&C counties. Recreation facilities were wholly dependent on the funding provided through the Congressional appropriations process for operations and maintenance funding.

In March of 1998, The Klamath Falls Resource Area was added to the BLM-wide Recreation Fee Demonstration pilot program. This program allows the resource area to retain collected recreation fees to be used for maintenance of recreation sites and areas from which they were collected. A special account has been established for each recreation site and program.

The Association of O&C Counties supported the retention of all recreation fee revenues under the Fee Demonstration Pilot authority to help operate the BLM's recreation facilities and programs.

In FY 2003, a total of \$21,012.33 in fees were collected at the three participating recreation sites. The revenue from the Recreation Fee Demonstration program is used to fund visitor services and a number of minor maintenance projects associated with the recreation program. Fees generated from these recreation sites and applied to the Fee-Demo program are shown in Table 18.2. Revenues collected in FY 2003 are used to pay for projects in FY 2004.

Fee Demonstration funds were used to pay wages for two seasonal park rangers assigned to Topsy Recreation Site and the upper Klamath Wild & Scenic River. Other funds were used to rent construction and maintenance equipment, to pay for toilet and dumpster rentals and service, to fund expenses for campground hosts and other volunteers, and to purchase construction and maintenance supplies.

**Table 18.2 - Recreation Fee Demonstration Project Fiscal Year 2003**

	<b>FY03</b>	<b>FY03 Amount Invested</b>	<b>Cumulative</b>
<b><u>Recreation Fee Demo Program</u></b>	<b><u>Revenue</u></b>	<b><u>Back Into Sites</u></b>	<b><u>Revenue*</u></b>
Klamath River OR-14	\$12,640	\$9,850	\$66,540
Klamath Falls Resource Area OR-15 (Topsy and Gerber Campgrounds)	\$8,370	\$18,890	\$45,070
<b>Total Recreation Fee Demo Funds</b>	<b>\$21,010</b>	<b>\$28,740</b>	<b>\$111,610</b>

\* Since Year of Initiation (1998)

## Status of Recreation Plans

- Pacific Crest National Scenic Trail Special Recreation Management Area (SRMA) - Recreation Area Management Plan to be coordinated by Medford District. Completed August of 1998.
- Klamath River SRMA Plan to be evaluated, updated and incorporated into the Klamath River Management Plan - A draft river plan/environmental impact statement was released in April 2003.
- Klamath River Scenic Waterway Plan - The BLM and the State of Oregon signed a memorandum of understanding (12/31/97) for joint management of the Wild and Scenic River/State Scenic Waterway. A separate chapter of the Klamath River Management Plan/Environmental Impact Statement will address State Scenic Waterway issues. The administrative rules (management plan) for the Klamath River Scenic Waterway were adopted by the Oregon Parks and Recreation Department Commission on September 25, 2002 and became effective on October 3, 2002.
- Hamaker Mountain SRMA - An analysis of recreation issues and projects were



completed during the Topsy/Pokegema Landscape Analysis, July 1996 (OR #014-98-01). Further project planning is ongoing for future recreation project developments. Project implementation is contingent upon adequate funding.

- Stukel Mountain SRMA - No recreation planning or watershed analysis has occurred. However, a local county advisory group (Stukel Road Task Force) completed a preliminary assessment of recreation issues in FY99. This information will be incorporated into future planning and project implementation. Project implementation is contingent upon adequate funding.
- Wood River Wetland SRMA- Completed Resource Management Plan July 1995. Project implementation is ongoing.
- Site-specific planning for recreation pipeline restoration funding projects is ongoing at several facilities, including Gerber recreation site, Topsy Recreation Site and Wood River Wetland.

## Volunteer Activities

In FY 2003, volunteers contributed approximately 4,615 total hours of time and labor to nearly every resource program in the Klamath Falls Resource Area. Volunteers continue to provide substantial assistance to the recreation, wildlife, and cultural resources programs, as well as several of the resource area's community outreach events. Volunteer positions vary widely, ranging from summer campground hosting and park maintenance, to promoting International Migratory Bird Day, to monitoring wildlife in the winter. Approximately 114 individuals, including 6 campground hosts, volunteered their efforts and services to the Klamath Falls Resource Area. One group of volunteers from Agency Lake (adjacent to Wood River Wetland) has adopted the wetland, maintaining the recreation facilities and area landscaping. This group of residents has been extremely helpful in keeping the public facilities clean and free of litter. Fence construction and sign installation for the Kerwin Ranch Meadow Restoration Project was completed with the help of the Four Runners of Klamath Falls.

One stand out volunteer is a student at Oregon Institute of Technology, completing work on her Senior thesis project. Volunteering over 300 hours, she has been instrumental in gathering and assimilating data on native bat species. This data is already proving to be very important not only locally, but also on a regional basis.

In September 2003, the Klamath Falls Resource Area held its fourth annual National Public Lands Day event. This nationally sponsored event was held at Wood River Wetland, where approximately 35 community volunteers and 15 BLM volunteers planted trees and shrubs, built and installed bird boxes, reinforced a dike, and installed canal water crossings. Many of the participants in this event were elementary school children, who enthusiastically "dug in" to the work at hand. In addition, 10 volunteers from the Four Runners 4-Wheel Drive Club, cooked and served a lunch of hamburgers and potato salad, free of charge, to all of the workers who participated in the day's activities.



*Tree planting - "Digging In" and Four Runners cooking crew, photographs by Kelly Hollums.*



## Tourism

The BLM is a member of the *Klamath/Lake/Modoc/Siskiyou Outdoor Recreation Working Group*, a consortium of government and private recreation and tourism entities from several counties within Oregon and California. The working group continues an active role in promoting tourism by providing pamphlets and brochures that show scenic byway travel routes, towns and cities, and areas of interest to visitors. The BLM participates in *The Answer People Group*, an informal informational sharing group for front line public contact representatives from public service and private tourism related businesses.

## 19.0 Forest Management and Timber Resources

The Klamath Falls Resource Area manages approximately 221,000 acres of land located in Klamath County. Approximately 51,230 acres are located west of Klamath Falls and are within the Northwest Forest Plan area. Approximately 23,550 acres (50%) of the commercial forest land on the Westside are available for timber harvest. On the Eastside, there are approximately 16,200 acres of commercial forest land of which approximately 8,800 acres (50%) are available for harvest. The Resource Management Plan provides for a sustainable timber harvest, known as the Allowable Sale Quantity (ASQ), from the Klamath Falls Resource Area. On the Westside, the ASQ is 5.91 MMBF (million board feet). On the Eastside, the ASQ is 0.40 MMBF.

### Silvicultural Prescriptions

To meet the ASQ commitment, the Klamath Falls Resource Area to date has used primarily two types of silvicultural treatments or prescriptions: Density Management and Mortality Salvage. In FY 2000, the KFRA also started implementing a third type of silvicultural prescription: Regeneration Harvest.

#### Density Management

Density Management treatments are designed to improve or maintain forest health and are proactive efforts to improve stand resiliency by reducing stand densities and fuel loads. Density Management prescriptions include thinning from below to reduce competition to under-represented species as well as to improve the resiliency of the large-tree component. Approximately 20-30% of the trees are generally removed under a Density Management prescription. Small (five acres or less) patch cuts are included as part of the Density Management treatment. These are used in areas to regenerate the less shade-tolerant and under-represented species (pines and Douglas-fir). Excess trees of sub-merchantable size are sometimes cut and removed concurrently, and logging slash is treated or removed, which significantly reduces wildfire hazard and prepares the site for prescribed burning. In fiscal year 2003, the KFRA offered for sale approximately 5.6 MMBF of timber on 599 acres where Density Management prescriptions were applied.

#### Regeneration Harvests

In FY 2003, 129 acres of Regeneration Harvest were included in the 406 acre Surveyor Timber Sale. Per KFRA RMP guidelines, an average of 16-25 large green trees per acre are required to be left in Regeneration Harvest units. This prescription is primarily used in older stands, in decadent stands, and in stands where there is a need to initiate and/or enhance the development of seedlings and saplings in the understory while still maintaining an overstory component.

## **Mortality Salvage**

The other primary type of harvest prescription, Mortality Salvage, is used to remove scattered dead and dying trees. As a result of continuing local insect infestations and high winds in localized areas, the Klamath Falls Resource Area was able to meet part of its ASQ by offering and negotiating salvage sales to capture the scattered mortality. In FY 2003, the Klamath Falls Resource Area sold 1.1 MMBF of mortality salvage from approximately 390 acres.

## **Timber Sale Planning**

The timber sale process, including the planning, watershed analysis, environmental analysis, consultation, and the biological and cultural surveys, is a two to four year process. The public is given the opportunity to comment on proposals during the planning and scoping phase. Notices are printed in the local newspaper requesting comments during the environmental analysis period. In addition, when public tours are given, they are announced ahead of time. Once the layout, cruising, and appraisal is completed and the contract is prepared, the timber sale is ready to be offered and a final decision appears in the local newspaper stating when the sale will be auctioned. Below is a list of the tables that relate to the timber sale program:

Table 19.1	Timber Sale Volume and Timber Sale Acres - FY 2003
Table 19.2	Timber Volume Sold in fiscal year 2003
Table 19.3	Harvest Activity in FY 2003
Table 19.4	Timber Sales planned for fiscal year 2004 & 2005
Table 19.5	Status of all sold and awarded sales since signing of the RMP
Table 19.6	Summary of Volume Sold

## **Cumulative Status of Timber Sale Volume and Acres**

Refer to Table 19.1 for a summary, by land use allocation, of the timber volume and acreage that has been harvested in the KFRA since October 1, 1994. A similar table (M-7) in the Monitoring Report also compares the volume and acres with RMP/EIS assumed average and percent of assumed average. Discrepancies between actual treatments and assumed averages are discussed in the monitoring section. All KFRA Westside lands are in the Southern General Forest Management Area (SGFMA), described in the Northwest Forest Plan.

## **FY 2003 Timber Sale Accomplishments**

### **Timber Sold in FY 2003**

The Klamath Falls Resource Area sold and awarded five timber sales in FY 2003. Approximately 11.9 MMBF of timber from about 1,784 acres were sold (Table 19.2). The total price of these sales plus modifications to existing sales in FY 2003 was valued at \$1,383,062.48. The Annual Sale Quantity (ASQ) for the Klamath Falls Resource Area is approximately 5.9 MMBF per year. The ASQ was exceeded in FY 2003 to make up for the shortfall in previous years. The shortfall in Westside ASQ volume in previous years was due to on-going litigation in regards to harvesting in northern spotted owl habitat within the boundary of the Northwest Forest Plan.

### **Harvest Activity in FY 2003**

During FY 2003, harvest activity occurred on seven sales (Table 19.3). Approximately 5.868 MMBF of timber on about 2,691 acres valued at \$798,388.62 was removed from these sales.

### **FY 2004 Timber Sales Planned**

The annual timber sale plan (Table 19.4) may be changed, altered, or amended by the authorized officer. None of the proposed sales are set-asides.



### Eastside

No eastside sales are planned for FY 2004. There will likely be some modifications to existing sales to capture scattered mortality.

### Westside

Two timber sales are planned on the Westside in FY 2004 (Table 19.4).

## Status of Sold & Awarded Klamath Falls RMP Timber Sales

Table 19.5 lists the status of Klamath Falls Resource Area sales that have been sold and awarded since signing of the RMP in June of 1995. As shown, the KFRA presently has fifteen completed timber sale contracts and seven active contracts. Seven timber sales have been monitored, three of which have involved the Regional Ecosystem Office (REO) review team, and all have involved the resource area interdisciplinary team. The results from the monitoring are discussed in the Monitoring Report. Tables 19.6, 19.7, 19.8 and 19.9 summarize sale activity from 1995 to 2003.

**Table 19.1 - Klamath Falls Timber Sale Volume (MBF) and Acres FY 2003**

	<u>Westside</u>		<u>Eastside</u>		<u>Combined</u>	
<u>Total MBF</u>	<u>FY 2003</u>	<u>FY 95-03</u>	<u>FY 2003</u>	<u>FY 95-03</u>	<u>FY 2003</u>	<u>FY 95-03</u>
Timber Sale Program	10,724	55,715	835.74	4,536.14	11,559.24	60,250.88
Matrix Timber Sales	10,724	55,350	692	4,072.4	11,415.5	59,422.64
All Reserves	0	365	143.74	63.74	143.74	828.24
Key Watersheds	10,712	36,793	0	0	10,711.7	36,792.8
Regeneration Harvests	4,527	4,810	0	0	4,527	4,810
Density Management	4,927	36,641	670	2,535.2	5,596.8	39,176.5
Mortality Salvage	1,131.1	3,686	0	1,487.5	1,130.7	15,173.2
Small Sales (Regulated)	0	70	22	49.7	22	119.94
R/W Clearing	139	143	0	0	139	143
Unmapped LSRs	0	22	0	0	0	21.5
Riparian Reserves	0	259	-2	51	-2	309.9
Total Admin Withdrawal	0	84	145.74	412.74	145.74	496.84

	<u>Westside</u>		<u>Eastside</u>		<u>Combined</u>	
<u>Total Acres</u>	<u>FY 2003</u>	<u>FY 95-03</u>	<u>FY 2003</u>	<u>FY 95-03</u>	<u>FY 2003</u>	<u>FY 95-03</u>
Timber Sale Program	796	16,584	879	3,246	1,675	19,830
Matrix Timber Sales	796	16,436	344	2,581	1,140	19,017
All Reserves	0	148	535	665	535	813
Key Watersheds	796	9,448	0	0	796	9,448
Regeneration Harvests	129	193	0	0	129	193
Density Management	275	9,754	324	1,457	599	11,211
Mortality Salvage	390	6,485	0	1,104	390	7,589
Small Sales (Regulated)	0	0	20	20	20	20
R/W Clearing	2	4	0	0	2	4
Unmapped LSRs	0	2	0	0	0	2
Riparian Reserves	0	96	-1	39	-1	135
Total Admin Withdrawal	0	50	536	626	536	676

**Table 19.2 - Timber Volume Sold in FY 2003**

<u>Name</u>	<u>Acres</u>	<u>Volume (MMBF)</u>	<u>Value</u>
Rattlesnake Negotiated TS	48	0.101	\$8,080.00
Surveyor TS	406	9.581	\$1,187,483.30
Whiteline Redone TS	282	0.573	\$22,189.75
Toolbox TS	109	0.344	\$32,464.22
Boundary Spring Juniper	366	0.079	\$1,800.00
Modifications	383	1.137	\$127,492.21
Small Sales (sawlogs)	20	0.022	\$481.00
<u>Small Sales (juniper logs)</u>	<u>170</u>	<u>0.067</u>	<u>\$3,072.00</u>
Totals KFRA (BLM)	1,784	11.904	\$1,383,062.48
<u>Non BLM Sale</u>			
USF&WS	1,040	2.672	\$92,428.96

**Table 19.3 - Harvest Activity for FY 2003**

<u>TS Contract</u>			<u>Volume Yarded</u>	
<u>Number</u>	<u>Sale Name</u>	<u>Harvest Acres</u>	<u>(MMBF)</u>	<u>Value</u>
OR-014-TS1-2	Grenada West	700	1.752	\$150,430.70
OR-014-TS2-3	Sinking Salvage	295	0.671	\$74,578.60
OR-014-TS0-1	Muddy Tom	916	2.548	\$510,352.30
OR-014-TS9-1	Bly Mountain	257	0.373	\$20,682.80
OR-014-TS3-1	Rattlesnake Negotiated	48	0.101	\$8,080.00
OR-014-TS3-6	Boundary Spr. Juniper	366	0.079	\$1,800.00
<u>OR-014-TS3-4</u>	<u>Toolbox Salvage</u>	<u>109</u>	<u>0.344</u>	<u>\$32,464.22</u>
Totals		2,691	5.868	\$798,388.62

**Table 19.4 – Planned Timber Sales (FY 2004 & 2005)**

<u>FY</u>	<u>Sale Name</u>	<u>Location</u>	<u>W/E</u>	<u>Date</u>	<u>MMBF</u>	<u>Acres</u>	<u>Harvest Rx</u>
04	Baldy Salvage	T39S, R5&6E	W	June 2004	2.00	300	MS
04	Matchbox	T40S, R7E Sections 5&9	W	July 2004	1.5	600	DM/UR
05	Buck Again	T38S, R5E, 13, 15 & 25	W	June 2004	3.00	400	DM/RH/MS
05	CHEW	T40S, R6E, 1,11,12,14	W	June 2005	2.75	1,200	DM/UR
		T40S, R7E, 3 and 5					

## NOTES:

- The sales listed above do not include small negotiated sales such as Right-of-Ways.
- W/E : W = Westside Sale (West of Klamath Falls) E = Eastside Sale (East of Klamath Falls)
- DM = Density Management sales are designed primarily to improve forest health conditions. Silvicultural prescriptions are written to maintain uneven aged stands and also maintain and improve the health and resiliency of primarily the shade intolerant species: ponderosa pine, sugar pine and Douglas-fir. They are also designed to reduce stand densities, fuel loads, and risk of stand replacing wildfires.
- MS = Mortality Salvage sales are designed to capture the immediate but scattered mortality (dead or dying trees) occurring over the Resource Area. This primarily involves only the removal of the recent mortality within the stand. Normally, less than 10% of the volume removed is live trees in the mortality salvage sales. Some thinning does occur beneath the old growth pines. Failure to remove the immediate mortality results in wood deterioration and complete loss of commercial value within approximately two years.
- UR = Understory Reduction - Part of the objective of the sale is to reduce the density of primarily submerchantable (3"-7" diameter) shade tolerant species in the understory to reduce fire risk and ladder fuels as well as to enhance health of overstory trees.
- RH = Regeneration Harvest - Designed primarily to initiate and to enhance the development of seedlings and saplings in the understory while still maintaining an overstory component. Per KFRA RMP requirements, of an average of 16-25 large green trees per acre will be left in Regeneration Harvest Units.



**Table 19.5 – Status of Sold and Awarded Timber Sales**

<b>FY</b>	<b>Sale Name (Area)*</b>	<b>Location</b>	<b>Date</b>	<b>Volume (MMBF)</b>	<b>Acres</b>	<b>Harvest Prescript**</b>	<b>%Complete (FY monitored)</b>
95	Frosty One (W)	Upper Johnson Creek Area	9/95	2.8	829	DM/UR	100%
96	Too Frosty (W)	Upper Johnson Creek Area	1/96	2.5	459	DM/UR	100% (1997)
96	West Rome I Salvage (W)	KFRA Lands North of HWY 66	6/96	3.0	2,000	MS	100%
97	Lower Spencer Salvage (W)	KFRA Lands North of HWY 66	12/96	2.5	2,000	MS	100% (1998)
97	West Rome II Salvage (W)	KFRA Lands North of HWY 66	12/96	2.0	1,500	MS	100%
97	Stukel Mountain (E)	Stukel Mountain Area	6/97	0.30	300	DM	100% (2000)
97	SKB Neg. Salvage (W)	Blowdown - Buck Mountain	6/97	0.05	50	MS	100%
98	Kakapo Stew (W)	Lower Spencer Creek Area	12/97	2.0	397	DM/UR	100% (1999)
98	Grenada East (W)	S. of HWY 66 – W. of Hamaker Mt.	7/98	2.5	1,300	DM/UR	100% (2001)
98	STH Neg. Salvage (W)	Blowdown - Burton Flat Area	9/98	0.05	50	MS	100%
99	Bly Mountain (E)	Klamath Forest Estates	7/99	1.06	646	DM	100% (2003)
00	Muddy Tom (W)	S. of HWY 66 - W. of Klamath River Canyon	6/00	4.6	1,873	DM/UR	90%
00	Clover Hookup (W)	N. of HWY 66 - Lower Spencer Creek Area	8/00	2.8	944	DM/UR/RH	100% (2002)
01	Grenada West (W)	S. of HWY 66 – E. of Klamath River Canyon	8/01	2.6	1,003	DM	100%
02	Slim Chicken (W)	S. of HWY 66 – E. of Klamath River Canyon	7/02	3.97	2,113	DM	0%
02	Saddled Again (W)	North of HWY 66	8/02	4.0	570	DM/RH	0%
02	Sinking Salvage (W)	North of HWY 66	8/02	0.04	5	MS	100%
03	Rattlesnake Negotiated (E)	Yonna Valley	10/02	0.101	48	DM	100%
03	Surveyor (W)	North of HWY 66	9/03	9.58	406	DM/RH	0%
03	Whiteline Redone (E)	Swan Lake Rim Area	6/03	0.573	278	DM	0%
03	Toolbox Salvage (E)	Silver Lake Area	6/03	0.344	109	MS	90%
03	Boundary Spr. Juniper (E)	Gerber Block	8/03	0.79	366	MS	90%

**Non BLM Sales**

98	USFWS Bear Valley (W)	Bear Valley Wildlife Refuge	6/97	1.0	245	DM/UR	100%
03	USFWS Bear Valley 2 (W)	Bear Valley Wildlife Refuge	6/03	2.6	1,040	DM	0%

NOTES: The sales listed above do not include small, negotiated sales such as Right-of-Ways.

\*W = Westside Sale (West of Klamath Falls). E = Eastside Sale (East of Klamath Falls).

\*\*Prescription abbreviations as follows:

- DM = Density Management sales are designed primarily to improve forest health conditions. Silvicultural prescriptions are written to maintain uneven aged stands and also maintain and improve the health and resiliency of primarily the shade intolerant species: ponderosa pine, sugar pine and Douglas-fir. They are also designed to reduce stand densities, fuel loads, and risk of stand replacing wildfires.

- MS = Mortality Salvage sales are designed to capture the immediate but scattered mortality (dead and/or dying trees) occurring over the Resource Area. This primarily involves only the removal of the recent mortality within the stand. Normally, less than 10% of the volume removed in the mortality salvage sales is live trees. Some thinning does occur beneath the old growth pines. Failure to remove the immediate mortality results in wood deterioration and complete loss of commercial value within approximately two years.

- UR = Understory Reduction - Part of the objective of the sale is to reduce the density of primarily submerchantable (3"-7" diameter) shade tolerant species in the understory to reduce fire risk and ladder fuels as well as to enhance health of overstory trees.

- RH = Regeneration Harvest - Designed primarily to initiate and to enhance the development of seedlings and saplings in the understory while maintaining an overstory component. Per KFRA RMP requirements, an average of 16-25 large green trees per acre will be left in Regeneration Harvest Units.

- USFWS – Bear Valley – The first proposed timber sale within the Bear Valley National Wildlife Refuge. The sale is designed to maintain and improve forest health within the refuge by thinning overstocked stands. Designed mainly to thin understory trees beneath eagle roosting trees and also to reduce fuel loads and risk of stand replacement wildfires.

- Timber Sale monitored by IDT and/or REO review team.

**Table 19.6 - Summary of Volume Sold**

<u>Sold (MMBF)</u>	<u>FY 03</u>		<u>FY 95-03</u>		<u>Declared ASQ<sup>1</sup></u>	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
ASQ Volume (Harvest Land Base)	10.7	0.7	55.4	4.1	53.2	4.0
Non-ASQ Volume (Reserves)	0.0	0.1	0.4	0.4	NA	NA
TOTAL	10.7	0.8	55.7	4.5	53.2	4.0
<u>Sold (Unawarded as of 9/30/03)</u>	<u>West</u>		<u>West</u>		<u>East</u>	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
ASQ Volume (Harvest Land Base)	0.0	0.0	0.0	0.0		
Non-ASQ Volume (Reserves)	0.0	0.0	0.0	0.0		
TOTAL	0.0	0.0	0.0	0.0		

<sup>1</sup> Declared annual ASQ times 8. See Table R-1 of KFRA Record of Decision and RMP.

**Table 19.7 - Volume and Acres Sold by Allocations**

<u>ASQ Volume -MMBF (Harvest Land Base)</u>	<u>FY 03</u>		<u>FY 95-03</u>		<u>Decadal Projection</u>	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
Matrix	10.7	0.7	55.4	4.1	59.1	4.0
Adaptive Mgmt Area	NA	NA	NA	NA	NA	NA
<u>ASQ Acres (Harvest Land Base)</u>	<u>FY 03</u>		<u>FY 95-03</u>		<u>Decadal Projection<sup>1</sup></u>	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
Matrix	796	344	16,436	2,581	9,590	2,690
Adaptive Mgmt Area	NA	NA	NA	NA	NA	NA
<u>ASQ Volume -MMBF (Key Watersheds)</u>	<u>FY 03</u>		<u>FY 95-03</u>		<u>Decadal Projection</u>	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
Key Watersheds	10.7	NA	36.5	NA	30.3	NA

<sup>1</sup>See Table R-1 of KFRA Record of Decision and RMP, and Appendix V-8 - Volume II of the final RMP.

**Table 19.8 - Timber Sales Sold by Harvest Types**

<u>ASQ Volume -MMBF (Harvest Land Base)</u>	<u>FY 03</u>		<u>FY 95-03</u>		<u>Decadal Projection</u>	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
Regeneration Harvest	4.5	0.0	4.9	0.0	18.9	0.0
Commercial Thinning & Density Management	4.9	0.7	36.7	2.6	40.2	4.0
Other (Mortality Salvage)	1.3	0.0	13.9	1.5	0.0	0.0
TOTAL	10.7	0.7	55.4	4.1	59.1	4.0
<u>ASQ Acres (Harvest Land Base)</u>	<u>West</u>		<u>West</u>		<u>West</u>	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
Regeneration Harvest	129	0.0	193	0.0	1,130	0.0
Commercial Thinning & Density Management	275	324	9,754	1,457	8,280	2,690
Other (Mortality Salvage)	392	20	6,489	1,124	0.0	0.0
TOTAL	796	344	16,436	2,581	9,590	2,960
<u>Reserve Acres</u>	<u>West</u>		<u>West</u>		<u>West</u>	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
Late Successional Reserves	0.0	0.0	2.0	0.0	NA	NA
Riparian Reserves	0.0	-1.0	96	39	NA	NA
TOTAL	0.0	-1.0	98	39	NA	NA

<sup>1</sup>See Table R-1 of KFRA Record of Decision and RMP, and Appendix V-8 - Volume II of the final RMP.



**Table 19.9 - Timber Sale Acres Sold by Age Class**

(Harvest Land Base)	FY 03		FY 95-03		Decadal Projection	
<u>Regeneration Harvest</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
0 - 70 Years	0	0	0	0	580	0
80 - 140 Years	17	0	42	0	445	0
150 - 190 Years	14	0	53	0	92	0
<u>200+ Years</u>	<u>98</u>	<u>0</u>	<u>98</u>	<u>0</u>	<u>193</u>	<u>0</u>
<b>TOTAL</b>	<b>129</b>	<b>0</b>	<b>193</b>	<b>0</b>	<b>1,310</b>	<b>0</b>

<u>Density Management &amp; Commercial Thinning</u>	FY 03		FY 95-03		Decadal Projection	
<u></u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
0 - 70 Years	0	21	2,205	396	2,241	734
80 - 140 Years	23	303	5,283	937	3,817	1,445
150 - 190 Years	127	0	1,332	124	1,142	511
<u>200+ Years</u>	<u>125</u>	<u>0</u>	<u>934</u>	<u>0</u>	<u>1,080</u>	<u>0</u>
<b>TOTAL</b>	<b>275</b>	<b>324</b>	<b>9,754</b>	<b>1,457</b>	<b>8,280</b>	<b>2,690</b>

<u>Mortality Salvage &amp; Other</u>	FY 03		FY 95-03		Decadal Projection	
<u></u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
0 - 70 Years	0	0	1,512	270	0	0
80 - 140 Years	332	20	3,404	580	0	0
150 - 190 Years	58	0	842	190	0	0
<u>200+ Years</u>	<u>2</u>	<u>0</u>	<u>731</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>TOTAL</b>	<b>392</b>	<b>20</b>	<b>6,489</b>	<b>1,040</b>	<b>0</b>	<b>0</b>

## Forest Development Activities

Data on Forest Development Activities is displayed in Table 19.10, which includes data by fiscal year on contracts awarded after October 1, 1994. Award date does not necessarily match the year the project was completed. Overall, for the first eight years of the KFRA RMP, silvicultural treatments implemented through timber sales, have focused on salvaging drought-related mortality and windthrow, as well as thinning overstocked stands. This forest health-driven prescription has resulted in fewer regeneration cuts than projected and a reduced need for associated reforestation and development treatments that would follow.

### Brushfield Conversion

In the RMP, no conversion acreage was identified for commercial forest lands, and no conversion treatments are expected.

### Site Preparation

Accomplishments total only 22% of projected levels on the Westside of the resource area, and 11% on the Eastside, which results from the emphasis on thinning for forest health, as opposed to regeneration harvesting.

### Planting (regular stock)

Tree planting is 49% of projected levels on the Westside and 95% on the Eastside. Westside planting is expected to increase in the next two to three years due to implementation of some regeneration cuts.

### Planting (improved stock)

No improved stock has been used to date. Potentially available stock is sugar pine and white pine, and possibly ponderosa pine and lodgepole pine from private sources. The use of genetically improved stock is expected to be well below projected levels, due to having a smaller planting program.

## **Vegetation Control**

This includes vegetation control treatments like brush cutting, grass grubbing, and paper mulching of seedlings. For the Westside, treatments are 134% of projected levels, while Eastside treatments completed are 108% of projected levels.

## **Precommercial Thinning (PCT)**

Treatment levels through FY 2002 are 262% of projected levels on the Westside, and 185% of projected levels on the Eastside. Depending upon funding, Westside PCT treatments could continue to exceed projected levels for the rest of the decade.

## **Restoration Thinning/Understory Reduction**

These treatments have usually been performed as part of timber sale operations or as part of fuels reduction treatments. Westside treatments are 298% of projected, and Eastside treatments are 9% of projected. Treatment needs are expected to continue at approximate projected levels on the Westside, while Eastside treatments are expected to increase.

## **Pruning**

On the Westside, 168% of projected work has been completed to date and 0% on the Eastside. The Eastside pruning acre targets are small and can easily be elevated to RMP projected levels under one service contract, assuming funding becomes available.

## **Fertilization**

To date, no fertilization treatments have been implemented on either side of the resource area. The small areas projected for the decade could be done under one service contract.

## **Animal Damage Control**

On the KFRA, animal damage control is usually porcupine or pocket gopher control. Treatments to date are 28% of projected on the Westside and 20% of projected on the Eastside. Limited regeneration harvests have reduced the need for these treatments. In addition, many older plantations are growing in size and are less vulnerable to gopher damage.



**Table 19.10 - Forest Development Activities**

**Entire Resource Area**

<u>Activity (Acres)</u>	<u>FY03</u>	<u>Totals to date</u>	<u>Average Annual</u>	<u>Projected Annual</u>	<u>Accomplishments (% of Projected)</u>
Brushfield Conversion	0	0	0	0	NA
Site preparation	12	425	47	250	19%
Planting (regular stock)	137	1,839	204	360	57%
Planting (improved stock)	0	0	0	115	0%
Vegetation Control	243	2,644	294	225	131%
Precommercial Thinning	188	1,508	168	70	240%
Restoration Thin/Understory Reduction	2,182	7,913	879	440	200%
Pruning	80	241	27	29	93%
Fertilization	0	0	0	32	0%
Reforestation Surveys	1,765	27,166	3,018	NA	NA
Animal damage control	0	1,017	113	415	27%
Oak Woodland thinning	0	328	36	NA	NA

**Westside**

<u>Activity (Acres)</u>	<u>FY03</u>	<u>Totals to date</u>	<u>Average Annual</u>	<u>Projected Annual</u>	<u>Accomplishments (% of Projected)</u>
Brushfield Conversion	0	0	0	0	NA
Site preparation	12	356	40	180	22%
Planting (regular stock)	22	1,324	147	300	49%
Planting (improved stock)	0	0	0	100	0%
Vegetation Control	243	2,405	267	200	134%
Precommercial Thinning	188	1,178	131	50	262%
Restoration Thin/Understory Reduction	2,182	7,784	865	290	298%
Pruning	80	241	27	16	168%
Fertilization	0	0	0	32	0%
Reforestation Surveys	1,450	22,844	2,538	NA	NA
Animal damage control	0	992	110	400	28%
Oak Woodland thinning	0	328	36	NA	NA

**Eastside**

<u>Activity (Acres)</u>	<u>FY03</u>	<u>Totals to date</u>	<u>Average Annual</u>	<u>Projected Annual</u>	<u>Accomplishments (% of Projected)</u>
Brushfield Conversion	0	0	0	NA	NA
Site preparation	0	69	8	70	11%
Planting (regular stock)	115	515	57	60	95%
Planting (improved stock)	0	0	0	15	0%
Vegetation Control	0	239	27	25	108%
Precommercial Thinning	0	330	37	20	185%
Restoration Thin/Understory Reduction	0	129	14	150	9%
Pruning	0	0	0	13	0%
Fertilization	0	0	0	NA	NA
Reforestation Surveys	315	4,322	480	NA	NA
Animal damage control	0	25	3	15	20%
Oak Woodland thinning					(No oak on the Eastside.)

## 20.0 Special Forest Products

The district sold a variety of special forest products as shown in Table 20.1. Through the first nine years of the RMP, the more popular special forest products that the KFRA is selling are firewood, Christmas trees, and boughs. Occasional permits for mushrooms, mosses, and transplants have also been issued. The KFRA issued 336 permits in FY 2003 for a total receipt value of \$4,615.50. The sale of special forest products follows the guidelines contained in the Oregon/Washington Special Forest Products Procedure Handbook. There are no estimates or projections in the RMP ROD or FEIS that need to be compared to the sold quantities shown. The large increase in the number of permits sold in FY 2003 was primarily due to the increased availability of firewood as a result of numerous juniper treatments in the Gerber area.

**Table 20.1 - Special Forest Products Fiscal Year 2003**

<b>Product*</b>	<b>WESTSIDE</b>		<b>EASTSIDE</b>		<b>COMBINED</b>	
	<b><u>FY2003</u></b>	<b><u>FY95-03</u></b>	<b><u>FY2003</u></b>	<b><u>FY95-03</u></b>	<b><u>FY2003</u></b>	<b><u>FY95-03</u></b>
<b>Boughs, coniferous</b>						
Contracts (#)	0	1	3	11	3	12
Amount (lbs)	0	500	30,300	66,100	30,300	66,600
Value (\$)	\$0	\$0	\$315	\$2,153	\$315	\$2,153
<b>Christmas trees</b>						
Contracts (#)	45	193	0	7	45	200
Amount (#)	62	251	0	7	62	258
Value (\$)	\$310	\$1,254	\$0	\$34	\$310	\$1,288
<b>Seed and seed cones</b>						
Contracts (#)	0	5	1	6	1	11
Amount (bushels)	0	1,850	20	1,220	20	3,070
Value (\$)	\$0	\$125	\$10	\$232	\$10	\$357
<b>Mosses - Bryophytes</b>						
Contracts (#)	0	1	0	1	0	2
Amount (lbs)	0	16	0	20	0	36
Value (\$)	\$0	\$14	\$0	\$10	\$0	\$24
<b>Mushrooms - Fungi</b>						
Contracts (#)	7	57	0	5	7	62
Amount (lbs)	176	3,111	0	950	176	4,061
Value (\$)	\$70	\$676	\$0	\$140	\$70	\$816
<b>Transplants</b>						
Contracts (#)	1	3	0	1	1	4
Amount (#)	10	254	0	500	10	754
Value (\$)	\$10	\$52	\$0	\$10	\$10	\$62
<b>Wood products /firewood</b>						
Contracts (#)	5	81	264	743	269	824
Amount (cubic feet)	1,141	26,533	60,465	182,835	61,606	209,368
Value (\$)	<u>\$56</u>	<u>\$5,129</u>	<u>\$3,845</u>	<u>\$12,637</u>	<u>\$3,901</u>	<u>\$17,766</u>
<b>Total Contracts (#)</b>	<b>58</b>	<b>341</b>	<b>268</b>	<b>774</b>	<b>326</b>	<b>1,115</b>
<b>Total Value (\$)</b>	<b>\$446</b>	<b>\$7,250</b>	<b>\$4,170</b>	<b>\$15,216</b>	<b>\$4,616</b>	<b>\$22,466</b>



## 21.0 Energy and Minerals

There were no mining plans of operations or mining or energy notices submitted during FY 2003. There are no leases of oil, gas or geothermal resources within the Klamath Falls Resource Area, although there are several known geothermal resource areas and most of the public lands are prospectively valuable for oil and gas. No new mining claims were filed in FY 2003. In FY 2003, the resource area sold 1,000 cubic yards of volcanic cinders and 100 tons of flat rock to individuals and provided 20,000 cubic yards of rock for crushing free of charge to local governments. Refer to Table 21.1 for Energy and Minerals program information.

**Table 21.1 - Energy and Minerals Management Fiscal Year 2003**

	<u>FY 2003</u>	<u>FY 95-03</u>
Total Mining Claims	0	1
New mining claims	0	0
Mining claims submitted	0	1
Mining claim compliance inspection	0	4
Noncompliance notices issued	0	0
Abandoned mines removed	0	0
Total Community Pits	0	0
Community pit inspections	3	3
Permits issued for mineral removal	3	52
Total Oil leases	0	0
Total Gas leases	0	0
Total Geothermal leases	0	0

## 22.0 Land Tenure Adjustments

Since completion of the RMP, 1,960 acres have been sold (see Table 22.1). The land was sold to offset losses to Klamath County's tax base that resulted from the Wood River Wetlands acquisition.

Since the RMP was completed, 1,160 acres originally identified for sale have been re-evaluated and determined suitable for disposal only by exchange. An additional 5,640 acres originally evaluated for sale was determined appropriate to be retained in Federal ownership. Resource values, including, but not limited to, wildlife habitat, timber, and cultural resources found on these lands justify retention in public ownership. In a plan amendment, Appendix I was updated to reflect the work accomplished over the first 4 years in evaluating public lands for sale or exchange.

Public Law 105-321 requires that, when selling, purchasing and exchanging land, the Bureau of Land Management may neither, 1) reduce the total acres of O&C, CBWR and Public Domain lands, nor, 2) reduce the number of O&C, CBWR, and PD lands that are available for timber harvest below what existed on October 30, 1998. To date we have sold 30 acres of public domain timberland.

An amendment to the RMP on Unintentional Encroachments and Survey Hiatuses was completed in FY 99. The plan amendment allowed a 1.01-acre tract of land to be moved from Land Tenure Zone 1 to Land Tenure Zone 3, which allows for sale. The amendment added

the following provision to the Land Tenure Adjustment - Management Actions/Direction for All Land Use Allocations section:

*"Where survey hiatuses and unintentional encroachments on public lands are discovered in the future that meet disposal criteria, the lands may be automatically assigned to Zone 3 for disposal."*

The disposal criteria to be used are those defined in Appendix I of the Klamath Falls Resource Area Record of Decision and Resource Management Plan, June 1995.

**Table 22.1 - Land Use Tenure Adjustments Fiscal Year 2003**

	<u>FY 2003</u>	<u>FY 95-03</u>
Amount of land acquired (acres)	0	0
Amount of land exchanged (acres)	0	120
Amount of land sold (acres)	120.77	2,080.77
Amount of land easement acquired (#/acres)	3/3.6	3/3.6
Leases/permits issued (number)	0	0
Unauthorized uses identified/resolved, (number/number)	1/.91	7/2.91
Withdrawals completed (number/acres)	0	1/1
Withdrawals revoked (number/acres)	0	11/11,281

## 23.0 Access and Rights-of-Way

The summary table in the front of this document summarizes some of the various realty actions accomplished in the eight years since implementation of the RMP.

Applications for rights-of-way have been received and processed at a moderate and consistent rate. New authorizations are predominantly for commercial use of existing roads to haul timber and other forest products. Rights-of-way were issued for timber haul roads, communications sites, and power lines.

## 24.0 Transportation and Roads

Approximately 520 miles of BLM controlled roads are within the Klamath Falls Resource Area. The BLM maintained approximately 70 miles of these roads in FY 2003. Additional road maintenance was performed by those authorized to use BLM roads under timber sale contracts and road use permits. Refer to Table 24.1 for a summary of road treatments completed in FY 2003. (For additional discussion of road treatments specific to watershed restoration, refer to Section 5.0 - Aquatic Conservation Strategy.)

The resource area is currently developing Transportation Management Objectives (TMOs) for each BLM road. A Transportation Management Plan (TMP) was completed for O&C lands west of Highway 97 in 1996. A TMP is being developed for Eastside lands and will be completed sometime in the future. Approximately 75% of the TMOs are completed for the Westside. The TMP will become final when the objectives are completed. If management changes over time, TMO's will also be revised.



**Table 24.1 - Roads and Transportation Management Fiscal Year 2003**

	<u>FY 2003</u>	<u>FY 95-03</u>
Roads maintained (estimated miles)	70	470
Roads decommissioned (miles)	3.20	9.88
Roads closed - year round (miles)	8.5	13.95
Roads closed - seasonally (miles)	0	18
New roads constructed (miles)	0.6	7.1
Road improvements (miles)	3.66	16.88
Transportation Plan for O&C land west of HWY 97	Completed in FY 1996	
Transportation Plan for Eastside KFRA	To be determined	

## 25.0 Hazardous Materials

One suspected release of hazardous waste was discovered on public land and determined to be non hazardous waste biological waste. The biological waste was removed by the cleanup contractor. Environmental site assessments were conducted on 2 parcels of private land over which easements were acquired and one was conducted for the proposed sale of 40 acres of public land. Compliance Assessment - Safety, Health, and the Environment audits were conducted on the Gerber and Fort Rock fire guard stations, Lakeview Interagency fire center and fire cache, Interagency Equipment and radio shops, Topsy and Gerber campgrounds, as well as the Lakeview District and Klamath Falls Resource Area offices. All facilities were inspected for compliance with hazardous material and Occupational Safety and Health Administration requirements. (See Table 25.1.)

**Table 25.1 - Hazardous Materials Management Fiscal Year 2003**

	<u>FY 2003</u>	<u>FY 95-03</u>
Number of Hazardous materials site evaluations	1	7
Number of Environmental Site Assessments completed for realty acquisitions	2	5
Number of facility assessments for corrective actions	10	17
Number of abandoned hazardous sites found	1	3
Hazardous waste incidents requiring emergency response	0	0
Removal actions	1	4

## 26.0 Wildfire/Fuels Management

On the Klamath Falls Resource Area in FY 2003 there were four wildfires, burning 3 acres (see Table 26.1). Prescribed fire is used to reduce hazardous fuels accumulations so that wildfires are reduced in size and intensity when they do occur. Another benefit of prescribed fire is to mimic natural wildfire in a mosaic pattern to benefit the total ecosystem (plants, animals, fish, soils, trees, and human uses). The BLM/Klamath Falls Resource Area is one of the leading Federal agencies in the field of prescribed fire and fuels management.

The public was notified of proposed prescribed burning activities on Stukel Mountain via news releases to local newspapers, television and radio stations as well as legal notices published in the Herald and News.

**Table 26.1 - Fire and Fuels Management Fiscal Year 2003**

	<b><u>FY 95-03</u></b>	<b><u>FY 2003</u></b>
Number (acres) of prescribed fires	25 (10,446)	87 (42,198)
Number (acres) of mechanical fuel treatment	26 (6,211)	48 (13,608)
Number (acres) of On-Resource Area wildfires:		
- number human caused wildfires (acres)	3 (3 acres)	8 (30)
- number lightening or natural caused wildfires (acres)	1 (less than 1 acre)	33 (1,143)
Number personnel assigned to on-Resource Area wildfires	0	113
Number of personnel assigned to off-Resource Area wildfires	115	272

## 27.0 Law Enforcement

The Klamath Falls Resource Area has a full time BLM Ranger along with the services of a Klamath County Deputy Sheriff (through a law enforcement agreement with Klamath County) for law enforcement duties. The Ranger works cooperatively with the Lakeview BLM District Ranger, Oregon State Police, Lake County Sheriff's Office, Lakeview and Klamath Falls Police Departments, National Park Service, and the U.S. Forest Service. Investigative support is provided by BLM Special Agents from the Oregon State Office.

Law enforcement efforts are focused on protecting natural resources and property while providing for public and employee safety. Educating the public in the safe and proper use of public lands is accomplished by patrol, investigation of criminal activity, issuance of verbal or written citations, and making arrests where appropriate.

There were 101 incidents and violations recorded in the Klamath Falls Resource Area in 2003 (see Table 27.1). These included employee harassment, theft of Federal property, forest products theft, vandalism to public or private property, Archaeological Resource Protection Act (ARPA) violations, weapons violations, search and rescue, growing controlled substance (marijuana garden), human-caused wildfire, camping or day-use violations, vehicle abandonment and improper disposal of household trash. The table below summarizes the law enforcement activity within the Klamath Falls Resource Area since 1995.

**Table 27.1 - Law Enforcement Fiscal Year 2003**

	<b><u>FY 2003</u></b>	<b><u>FY 95-03</u></b>
Number of full-time Rangers	1	1
Number of Law Enforcement Agreements	1	1
Number of Incidents or Violations	101	472
Number of warnings issued	31	86
Number of citations issued	11	20



# 28.0 Rangeland Resources / Grazing Management

## Overview

The rangeland management program administers livestock grazing activities on most of the lands in the Klamath Falls Resource Area (approximately 208,000 of the KFRA's 221,000 acres). Grazing licenses are issued yearly, authorizing up to approximately 13,000 Animals Unit Months (AUMs) on 96 individual grazing allotments (see Table 28.1). A percentage of the grazing fees (37.5%) go to the U.S. Treasury. The remaining fees are returned to the district and resource area for rangeland improvement projects to benefit wildlife and watershed resources while enhancing livestock grazing systems.

Existing projects such as water holes, spring developments, and fences are monitored and maintained, as necessary, either by range staff personnel or by the grazing users. Grazing use supervision is constantly performed during the grazing season to ensure compliance with approved grazing authorizations, with the efforts concentrated on resource priority allotments. The range program also collects vegetation inventory data, rangeland condition and trend information, actual livestock use information, and monitors vegetation utilization levels on high priority allotments. This information is evaluated - both formally and informally - to determine whether allotment goals and objectives are being met. Monitoring data is being utilized in an ongoing effort to assess efforts to meet the Standards for Rangeland Health on all grazing lands.

As required by BLM policy, a Range Program Summary (RPS) is published periodically to update the public on implementation of the RMP. This summary typically includes information on the season-of-use and forage allocation by allotment. Since the original RPS, which was included as part of the June 1995 Klamath Falls Resource Area RMP/Record of Decision (Appendix H), there have not been enough significant changes in the range program to warrant publishing a full, independent update (i.e. recounting all of the information for all of the KFRA grazing allotments). As the resource area allotments are assessed (see next section) and other changes in grazing management take place, the public will be updated via this Annual Program Summary and Monitoring Report for the KFRA. This APS will fulfill the requirement for the RPS.

**Table 28.1 – Range Resources Management Fiscal Year 2003**

	<b><u>FY 2003</u></b>	<b><u>FY 95-03</u></b>
Number of acres administered grazing	207,682 acres	207,682 acres
Number livestock operators	83	83 (average/year)
Number of allotments	96	96
Number of AUMs	10,600	11,000 (average/year)
Number of permits leases renewed/transferred	10	86
Billings issued/fees collected	86/\$14,000	86/\$14,000 (average/year)
Number of allotments/acres assessed (RHSAs*)	11/25,595 acres	36/158,921 acres
Acres of Ecological Site Inventory	9,110 acres	119,110 acres
Wild Horse and Burro Adoption Events**	0	3
Number of horses/burros placed	1	48

\* Rangeland Health Standards Assessments

\*\* Does not include yearly raffle of individual horse at the Klamath County Fair.

## Fiscal Year 2003 Summary

### Rangeland Health Standards Assessments

Eleven (11) KFRA grazing allotments had *Rangeland Health Standards Assessments* completed during FY 2003: Voight, Stukel-High, Rodgers, "J" Spring, Paddock, Bumpheads, DeVaul, Goodlow, Pankey Basin, Horse Camp Rim, and Rock Creek. These 11 allotments contain a total of 25,595 acres and comprise 12% of the total KFRA grazed acres. The last 8 listed allotments were assessed as part of the *Gerber-Willow Valley Watershed Analysis* which was finalized in July 2003. Since the Assessment process began in 1999, 76% of the KFRA's grazed acres have been assessed.

Rangeland Health Standards Assessments compare accumulated rangeland monitoring data against the five Standards for Rangeland Health. These standards address watershed function in uplands; watershed function in riparian areas; ecological processes; water quality; and native, threatened and endangered, and locally important species. These assessments also compare the rangeland monitoring data against other pertinent objectives (i.e. land use plan, ESA Section 7 consultations, etc.) to see if current grazing use is meeting them. (Note: These Assessments only address grazing management - not other uses of the public lands.) On November 13, 1998, the Klamath Provincial Advisory Committee (PAC) approved the KFRA Plan for the Implementation of Standards and Guidelines. The KFRA Plan is the local plan to implement the policies and guidance stemming from the broad direction contained in the August 12, 1997 "Standards for Rangeland Health - Oregon/Washington Standards and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington".

The entire assessment process for the resource area is scheduled to be completed in 2010 - a total of 12 years (1999-2010). This is an adjustment (extension) of the original schedule listed in the 2002 APS. This schedule extension is necessary in order to collect adequate information on many of the KFRA's smaller and lower priority allotments - most of which have never had basic rangeland resource information collected on them - so that a proper Assessment can be prepared.

For 9 of the 11 grazing allotments assessed in 2003, the vegetation conditions and current grazing management was found to be currently satisfactory and in balance with landscape capabilities. The two exceptions were that both the Pankey Basin and Bumpheads allotments were found to have some continuing livestock induced riparian problems. Riparian enclosure fencing has been proposed in both cases and in the planning stage to alleviate these problems.

### Endangered Species Act Section 7 Consultation

Three grazing allotments in the Gerber Reservoir area (Horsefly, Pitchlog, and Dry Prairie) are subject to formal consultation under Section 7 of the Endangered Species Act. These allotments in combination comprise over 20% of the KFRA. The existing Biological Opinion (BO) covering these allotments expired after the 1998 grazing season and was in need of renewal. All three were fully re-evaluated and re-consulted on in FY 99. Subsequent to the re-evaluation the USFWS issued a memorandum (1-10-99-I-47) that indefinitely extended the existing BO, with some very minor modifications, primarily dealing with monitoring requirements. An end-of-year grazing report for the 2002 grazing season was prepared for these allotments and submitted to the USFWS during early FY 2003, as required by the BO. The BO was reaffirmed for the 2003 grazing year by USFWS memorandum (1-10-03-L-066). The grazing report for the 2003 grazing year is pending at the time of publishing this APS.

### Grazing Leases and Fees

Ten grazing permits/leases were renewed or transferred during FY 2003. This process included appropriate NEPA review/documentation.



Approximately eighty-six licenses or billings were issued authorizing approximately 10,600 AUMs in grazing use and collecting approximately \$14,000 in grazing fees.

## **Range Improvements**

### **Tunnel Creek Fence Reconstruction:**

A riparian/meadow protection fence was built around the Tunnel Creek ACEC (near Buck Lake on the KFRA's west side) in 1997. Since that time, the traditional barbed wire fencing has been rendered totally ineffective because of heavy winter snow loads. During FY 2001, most of the fence was replaced with a high tensile, lay down fence that is more immune to snow loads. A small portion of the fence, still unfinished, was planned to be completed during the summer of 2002, but was not due to contractor problems. It was completed during FY 2003.

### **Riparian Fence Maintenance**

Range staff personnel continued to maintain all riparian enclosure and pasture fencing. This included the inspection and repair of approximately 25-30 miles of riparian related fencing within the resource area. The riparian enclosure fence around the Antelope Flat riparian area and the Dixie area (Long Branch Creek) were both partially rebuilt during FY 2003.

### **Monitoring of Grazing Allotments**

Monitoring of grazing use, and effects of that use, continued on priority allotments in accordance with the KFRA's *Coordinated Monitoring and Evaluation Plan for Grazing Allotments*. At least 15 high priority allotments had various monitoring data collected on them. These rangeland studies monitor utilization, ecological condition, vegetation trends, actual grazing use, and other resource attributes. As is typical of all grazing years, at least 100 grazing use supervision checks of high priority allotments were performed.

## **Fiscal Years 1996-2003 Summary**

### **Rangeland Health Standards Assessments**

The acreage of Assessments completed to date (FY 1999 to 2003) is 158,921 acres, or 76% of the KFRA allotted acres, which includes all of the high priority allotments in the resource area.

### **Rangeland Ecological Site Inventory**

Ecological Site Inventory (ESI): An ESI was completed for the entire Gerber Block (Eastside of the resource area) in FY97 and FY98. The Gerber Block is approximately 110,000 acres. Ecological Site Inventory, the BLM's rangeland vegetation survey method, allows for classification and comparison of the current vegetation to its potential. It also provides the Bureau information which assists in setting proper, achievable objectives for resource management. An Ecological Site Inventory also includes an Order 3 soil survey. The soil mapping for the Gerber ESI was done by a soil scientist from the BLM's Lakeview District ESI crew. The vegetation mapping was done by resource area range management specialists.

Beginning in late FY 2002 and continuing through 2003, an ESI was again commenced on the fragmented public lands located between Klamath Falls and the Gerber Block. The purpose of this survey is to gain baseline vegetation condition information on fragmented BLM administered lands that have never been formally vegetation inventoried. The soils were completed as part of the south Klamath County soil survey in the 1970's. This ESI information will be used to complete Rangeland Health Standards Assessments on these allotments over the next 6-8 years. A total of 9,110 acres were completed during FY 2003. It is expected that this ESI survey will be continued intermittently by existing staff over the next

five years (FY 2004-2008) and will eventually classify a total of 50,000 to 55,000 acres, including that completed in FY 2003.

## Monitoring of Grazing Allotments

Rangeland monitoring studies were completed during FY 1996-2003 in accordance with KFRA's *Coordinated Monitoring and Evaluation Plan for Grazing Allotments*. This directs the most monitoring emphasis on high priority (management category "I") allotments; in particular the three previously mentioned allotments that are under Section 7 Consultation. This includes various rangeland condition, trend, and utilization studies; riparian condition and photo trend studies; actual grazing use supervision and information; and other rangeland monitoring studies as needed.

## Four Mile Grazing Environmental Assessment

Four Mile Grazing EA: An environmental assessment (EA#OR-014-96-3) analyzing the grazing use of 1,200 acres in the Four Mile area, as well as its potential impacts, was completed and distributed for public review in April 1998. (Four Mile consists of public lands located northwest of Agency Lake that are withdrawn by Bureau of Reclamation and administered by the BLM.) A proposed grazing decision selecting the proposed action (Alternative A - light, rotational grazing) was issued on September 25, 1998 and sent to all identified interested publics. The Oregon Natural Resources Council subsequently protested the grazing decision. In addition, the U.S. Fish and Wildlife Service has expressed concerns about grazing the property relative to potential impacts on basin water quality and dependent listed species. Due to these concerns, the proposed grazing decision was cancelled and the BLM is pursuing "Area of Critical Environmental Concern" (ACEC) designation for the property. A neighboring landowner - and applicant for the grazing on the property - protested the cancellation of the proposed decision. In February 2002, the protest was dismissed by a DOI Administrative Law Judge who left open the possibility of future appeals on the ACEC designation. The ACEC is still pending designation.

## Wild Horse Management

The Klamath Falls Resource Area has one designated wild horse herd and herd management area, the Pokegama Herd Management Area (HMA). This HMA is located in the western portion of the resource area, west and north of the Klamath River Canyon, south of Highway 66, and east of Jenny Creek, overlapping the border between California and Oregon.

In 1996, 20 head of horses were removed from the HMA and adopted to the public via the BLM's Adopt-a-Horse program. No removals were done in FY97, FY98, or FY99. Based on aerial and ground counts of the wild horse herd made during FY 2000, the herd size was 55 horses. This herd size was above the upper end of the Appropriate Management Level (AML) of 30-50 animals. This AML was initially established in the Klamath Falls Resource Area RMP (June 1995) and has been evaluated and reaffirmed in the Lakeview District Wild Horse Gather EA (OR-010-95-10) and again in the 1996 Topsy/Pokegama Landscape Analysis. Since the herd was above AML in FY 2000, a total of 18 horses were removed. These horses were transported to the Burns Wild Horse corrals and placed in the Adopt-a-Horse program. No additional removals have been done since FY 2000. The most recent census (February 2002) counted 22 head in the HMA. Based on this census and ground counts, the actual total herd number is believed to be currently 30 to 35 head.

A major portion of the KFRA's wild horse program consists of performing compliance checks of wild horses and burros adopted by residents of Klamath County. Compliance checks of adopted horses and their maintenance facilities is required to assure that adopters properly execute their responsibilities as required by the *Private Maintenance and Care Agreement* that adopters sign when adopting an animal. Adopters are eligible to receive title to the animal after one year of appropriate care. In FY 2003, the KFRA completed on-site



inspection of 100% of the recently adopted and untitled local horses and burros. In FY 2003, 12 horses/burros were inspected for adopter compliance. Twenty-three horses/burros were inspected for compliance in FY 2002, 5 in FY 2001, 16 in FY 2000, 21 in FY 1999, 22 in FY 1998, and eight in FY 1997. Prior to FY 1997, compliance checks were not required.

The KFRA sponsored a wild horse adoption in May of 2001, in conjunction with the Horse Packing and Wilderness Skills Clinic at the Klamath County Fairgrounds. Twenty-six horses were adopted out at the 2001 event. The previous event in May of 1999 adopted out 21 horses. An adoption event was planned for the May 2003 Packing Clinic. However, it was cancelled due to a lack of funding in the wild horse program. The status of future events is unknown at this time.

Starting in 1999, the Klamath Falls Resource Area teamed up with the local 4H & FFA equestrian clubs to promote wild horse awareness and education and to provide scholarships for deserving young students. Every year since then – including 2003 - the Klamath Falls 4-H/FFA members sell raffle tickets to people who qualified for horse adoption. The drawing is held at the Klamath County fair in August and has generated an average of \$1500 per year in donations for a scholarship fund for eligible equestrian members.

## 29.0 Cadastral Survey

The Oregon State BLM office provides cadastral support to the resource area. No official cadastral survey was completed in the resource area during FY 2003. There is an ongoing remonumentation survey in progress and five monuments were set (see Table 29.1).

After work at the Wood River restored the river to the historic channel, a survey of approximately one mile was conducted under private contract to readjust boundaries and set five monuments. (This information is not included in Table 29.1.)

**Table 29.1 - Cadastral Survey Summary Fiscal Year 2002**

	<u>FY2003</u>	<u>FY95-03</u>
Number of survey groups/projects completed	0	1
Number of projects ongoing*	1	1
Number of monuments set	5	10
Number of miles surveyed	0	1
Number of miles of federal boundary posted	0	1

\*Remonumentation survey for Adobe Bill Timber Sale unit.

## 30.0 Education and Outreach

The Klamath Falls Resource Area sponsored several community outreach events in FY 2003, and played an active role in many others. Most of the events focused on public education about natural resources management, stewardship practices on public land, BLM programs and mission, and creating partnerships with private landowners and service organizations committed to improving conditions for all living things. KFRA employees presented programs both school children and adults. Topics discussed included wetland biology, wildland fire suppression and prescribed fuels treatments, forest health practices, archeology, wildlife biology, rangeland ecology, as well as careers in natural resources. (Refer to Tables 30.1, 30.2 and 30.3.)

For the past several years the resource area has hired two or three high school students in the Apprentice in Science and Engineering Program. The program is designed to introduce sophomore and junior students to natural resource management professions. This year two students were hired; one in archeology, the other in forestry. Each student was also given a general overview of the many professions and specialties employed by the BLM.

### **Earth Day**

Interpretive displays at this event focused on the diversity of outreach projects which the Klamath Falls Resource Area is involved in. Visitors to the booth were educated about prescribed fire programs, the Wild Horse & Burro Adoption Program and carnivore studies currently being conducted on the resource area. In addition, the public was invited to participate in upcoming resource area events, including International Migratory Bird Day and National Public Lands Day. Several BLM staff members volunteered throughout the day, giving away free pine seedlings, stickers, bookmarks, and other items which encourage good land stewardship practices.

### **Annual Horse Packing & Wilderness Skills Clinic**

In May, BLM sponsored a booth, complete with a corral, where people could get a close-up look at "Boo", a wild horse from the Beatty Butte herd. Students from local 4-H and Future Farmers of America organizations, sold raffle tickets to raise money for college scholarships. Employees handed out brochures and answered questions regarding the Wild Horse and Burro Adoption Program, and BLM recreational opportunities. This event, which draws people from throughout the northwest, was held at the Klamath County Fair Grounds Event Center May 2-4. There were over 2500 visitors at this year's event.

### **Annual International Migratory Bird Day Celebration**

This marks the 4<sup>th</sup> year that the Klamath Falls Resource Area has been the primary sponsor of an International Migratory Bird Day (IMBD) event held in Klamath Falls. The IMBD is the hallmark outreach event for Partners in Flight, which focuses on migratory birds. Other sponsors in this local event included the U.S. Fish and Wildlife Service, Oregon State University Klamath County Extension Service, Winema National Forest, Klamath Community College, Klamath County Parks and Recreation Dept., and community volunteers. The main outreach event included guided bird walks along the Lake Ewana trail, mist netting demonstrations, art and photographic displays, a variety of hands-on educational activities for children, and participation from community organizations. County commissioner, Al Switzer and Oregon Tourism Commission Representatives from Salem presided over a ribbon cutting ceremony which officially kicked off development of the Klamath Basin Birding Trail. Klamath Falls Resource Area personnel are currently serving on this community outreach project as well.

Other educational efforts designed to complement the IMBD, included an educator's workshop on migratory birds. BLM personnel helped in the planning and facilitation of this workshop, which was sponsored by the Oregon State University Extension Service. BLM staff gave presentations on bird migration, bird habitat management, and bird biology. In addition to the workshop, BLM also teamed up with the local community college to offered free classes on various subjects related to birds and their habitat needs.

### **National Free Fishing Day/Klamath County Foster Children Fishing Day**

South Gerber campground was the site for this year's Free Fishing Day for foster children living in Klamath County. Many families stayed overnight in the campground, enjoying activities hosted by a local chapter of Girl Scouts. The Klamath Falls Resource Area helped sponsor the event by providing free coloring books, whistles, fishing supplies and other goodies for the 85 children who participated in the event.

In addition, Klamath Falls Resource Area staff joined with personnel from the Winema National Forest to sponsor free fishing, open to the general public, at the Winema's Four Mile



Quarry. Nearly 100 children and their families enjoyed a day of fishing and crafts on the Winema National Forest site.

### **RAP (Resources and People) Career Camp**

Designed for High School students ages 15 and older, the week long RAP Camp focuses on educating students about the region's vast array of natural resources and how they are all inter-related. Sessions focus on hands-on learning, with a wide variety of demonstrations and field trips throughout the week. Several agencies participate in the event including, KFRA, Winema National Forest, Modoc National Forest, USFWS, various private organizations, and private citizens.



*"Faces of Future Resource Managers?" - RAP Camp, photograph by Kelly Hollums*

### **Fun With Fungi**

Twenty people joined local BLM and USFS staff on an autumn field trip to the Brown Mountain Trail. Besides the beautiful scenery, participants observed many varieties of fungi as well as other native plants and grasses. The event was cosponsored by the KFRA, the Winema National Forest, and the Native Plant Society of Oregon.

### **Klamath County Fair**

The BLM provided an information booth on wild horses and burros at the Klamath County Fairgrounds in August 2003. Each year a KFRA range technician volunteers time to halter break a wild horse which is then raffled at the fair. This successful event has been a mainstay at the Klamath County Fair since 1994. Prior to 1999 the "fair horse" was raffled with free tickets to anyone who met the BLM requirements for adoption. For the last 4 years, the BLM working in partnership with local 4-H Equestrian Club and the Future Farmers of America groups, the raffle tickets have been sold for \$5 each to raise money for a scholarship fund. The scholarship is then awarded to a member of participatory groups.

### **National Public Lands Day**

On September 20, 2003 the resource area celebrated National Public Lands Day. Approximately 50 people from the community, plus 15 employees participated in the event



which was held at Wood River Wetland. Activities included construction and installation birdhouses, planting of trees and native shrubs, trail maintenance, and construction of a section of dike along the river channel. Members of the Four Runners Club (a local 4-wheel drive club) prepared and served a hot lunch to all of the attendees. More than half of this year's participants were children, all of whom exhibited enthusiasm and commitment to caring for the land.

### **Oregon Archaeology Celebration**

In September twenty five people from southern Oregon and northern California took part in a bicycle tour along the historic Topsy Grade Road in the Klamath River Canyon. As part of Oregon's Annual "Archeology Celebration", participants rode over 22 miles of rugged rocky terrain, following the sole route available to travelers until the 1930's. Resource area archeologists, area historians, and other KFRA staff volunteered their time, offering interpretive talks at points of interest along the route. Topics included pre-historic use of the river by Native peoples, life in early white settlements in the area, logging history, and current logging and resource management practices. Although the day was unusually warm for late September, and the terrain was extremely steep, participants were enthusiastic from beginning to end. This event generated rave reviews from all involved!



*"Pedaling Through the Past" Participants, photograph by Kelly Hollums*

### **Table 30.1 - Environmental Education/Outreach Program Summary FY2003**

	<u>FY 2003</u>	<u>FY 97-03</u>
Number of education outreach programs/events offered	36	212
Number of participants	~8000	2000-8000/year

### **Table 30.2 - Environmental Education/Outreach Special Events FY 2003**

<u>Event/Activity</u>	<u>Date</u>	<u>Location</u>	<u># of Public Participants</u>
Bald Eagle Conference	Feb 12-14	Klamath Community College	150 adults
Earth Day	April 20	Jefferson Square Mall	~ 500 people
Wilderness & Horse Packing Clinic	May 2-4	Klamath County Fairgrounds	~ 2,000 people
International Migratory Bird Day	May 11	Veteran's Memorial Park	~600 people
National Free Fishing Day	June 12	Four Mile Quarry - Winema NF	150 children
RAP Camp	June 14-21	Camp Esther Applegate	82 participants
Klamath County Fair	Aug. 7-11	Klamath County Fairgrounds	~1000 people
6th Grade Forestry Tour	Sept. 17-19	Clover Creek Educational Area	891 students & teachers
National Public Lands Day	Sept. 20	Wood River Wetlands	50 people
Oregon Archaeology Celebration	Sept. 27	Klamath River Canyon	25 adults
"Pedaling Through the Past"			



**Table 30.3 - Environmental Education/Outreach Programs & Tours FY 2003**

<b>Program/Tour</b>	<b>Date</b>	<b>Location</b>	<b># of Public Participants</b>
Answer People (Info. meetings)	Monthly	Various locations in K Falls	20-35 - Adults
Wood River Wetland Management	10/01/02	Wood River Wetland	10 - NRCS employees
Wood River Wetland Management	10/18/02	Wood River Wetland	20 - SE Oregon RAC (Burns)
Fun With Fungi	10/26/02	Brown Mountain Trail	20 - Adults
Restoration Ecology	10/29/02	Wood River Wetland	30 - "Concerned Friends"
GIS Day	11/23/02	Jefferson Square Mall	20 - All ages
Wood River Wetland Management	01/09/03	Wells Ranch	15 - Adults
Wetland Management	01/14/03	Wood River Wetland	9 - Adults
Sophomore and Senior Projects	01/21/03	Oregon Institute of Tech.	15 - Adults
Channel Construction Project	01/29/03	USFWS Regional Office	10 - Adults
Land Mgmt/Wetland Restoration	02/03/03	Klamath Co. Comm. College	20 - Adults
Channel Construction Project	02/05/03	FWS - Jobs-in-the-Woods	10 - Adults
Bitterbrush Planting	02/20/03	Shasta Way Grange Hall	30 - Oregon Hunters Assoc.
Wetland Management	03/18/03	Wood River Wetland	1 - Jack Albert/Herald & News
Wetland Management	03/20/03	Wood River Wetland	6 - Ducks Unlimited
River Restoration	04/12/03	Wood River Wetland	20 - River Guides
Earth Day	04/20/03	Jefferson Square Mall	300 - All ages
IMBD Educators Workshop	04/25/03	OSU Extension Service	25 - Adults
WRW Management Overview	05/01/03	Wood River Wetland	75 - DOI "Conference on the Environment" members
International Migratory Bird Day	05/10/03	Veteran's Park	~600 - All ages
Wetland Biology	June 3-4	Running Y Ranch Resort	240 - 5th and 6th Graders
KRMP/DEIS Public Meetings	June 9-11	K Falls, Yreka, Copco	14, 11, and 32 - Adults
Apprent. in Science & Engineering	June-August	KFRA (Forestry)	One 17 year old
Apprent. in Science & Engineering	June-August	KFRA (Archaeology)	One 17 year old
Environmental Ed. Materials	June 13-16	Gerber Campground	100 - Girl Scouts and leaders
Wildflower and Bird Color. Books	July	Tulelake/Newell Schools	25 - students
Plant Identification/Ecology	07/08/03	Link River Trail	15 - 6th and 7th graders
Northern California RAC Tour	07/17/03	Klamath River Canyon	20 - Adults
Wetland Management Restoration	07/18/03	Wood River Wetland	75 - Adults
Wetland Management	07/19/03	Klamath Co. Fairgrounds	35 - Adults
Wildlife Adaptations (Owls)	07/30/03	Kingsley Field Summer Camp	70 - Girl Scouts
Environmental Ed. Materials	August	Klamath Sportsman's Park	80 - 6 to 14 year olds
Wetland Management	08/07/03	Linkville Academy	20 - High School Students
Antelope Habitat Management	08/15/03	Gerber Campground	12 - Elementary Students
Bird Coloring Books	08/25/03	Sacred Heart Vac.Bible Sch.	30 - Elementary Students
Outreach Program Overview	08/27/03	Henley High School	391 - Teachers
Wetland Management	09/12/03	Wood River Wetland	6 - Humb.State.Univ. staff
6th Grade Forestry School	Sept. 16-19	BLM Clover Hookup Rd.	891 - students and teachers
Watershed Weeks Tour	9/27/03	Klamath River Canyon	3 - (Klamath Watershed Council)

## 31.0 Research

Several research projects were active on the Klamath Falls Resource Area during FY 2002. These include:

### Profuse-flowered Mesa Mint

Profuse-flowered mesa mint (*Pogogyne floribunda*) was considered a rare annual mint (family Lamiaceae) endemic to the Modoc Plateau area of northeastern California, scattered among a few sites in Shasta, Lassen, and Modoc counties. Recently, however, the occurrence of the species was unexpectedly documented in Oregon, first at a single site near Foley Lake

north of Adel (first discovered through an herbarium survey), and then last year at two locations on the Gerber Plateau east of Bonanza. Known habitats for the species include seasonal wetlands such as vernal pools, shallow reservoir edges, and (prominently) silver sage basins, all areas generally subject to multiple use land management. This research will serve as a basis for the development of a conservation strategy that will focus on (1) the reproductive biology and fecundity of Oregon populations, (2) their potential response to disturbance (including hydrologic alterations), and (3) possible interactions with noxious and other weeds. In addition, comparisons will be made between the northern populations recently discovered in Oregon, and those from the previously known range in California. Species that exhibit unusual disjunct distributions across their range, such as profuse-flowered mesa mint, occasionally are shown to have previously unknown genetic or even taxonomic-level differences. Therefore, this study will also evaluate the Oregon populations to determine if measurable taxonomic or biological differences exist between populations from Oregon and California. The information gathered in the first year of this study will focus on the biology of the species, including seed production and breeding system; pollinator requirements; seed dormancy, longevity, and germination conditions; and growth potential under cultivation (to estimate the potential for possibly re-introducing the species into sites where it could become extirpated in the future). A modest series of monitoring plots will also be set up, as appropriate. Subsequent studies will include second year monitoring of plots, any necessary follow-up on the reproductive ecology investigations, and herbarium, field, and lab work associated with evaluating the California and Oregon populations for potential differences. The development of a final, comprehensive conservation strategy and biological evaluation will be completed during the second year.

### **Bear Valley Refuge Bald Eagle Roosting Project**

Roosting success of bald eagles in response to silvicultural treatments was studied in 2003. Data on roosting success were collected in areas treated to thin the forest understory to promote maintenance and recruitment of large roost trees, and in areas left untreated (control). Three years of pretreatment data were collected and two years of post treatment data has been collected. A cooperative agreement with US Fish and Wildlife Service was created so BLM could provide assistance in treating some of the mixed conifer stands on the Bear Valley Wildlife Refuge. This project will continue through FY 04.

### **Neotropical Migratory Landbirds**

A study of Neotropical migratory birds is being conducted in cooperation with Klamath Bird Observatory, Pacific Southwest Research, PacifiCorp, Winema National Forest, and Point Reyes Bird Observatory. On BLM lands, there are 44 point-count stations and four constant effort mist-netting sites in a variety of habitats.

### **Yellow Rails**

The multi-year research project on Klamath Basin populations was not funded in 2003. The population at Wood River Wetland was monitored twice during 2003 for presence/absence.

### **Ground Water**

An ongoing study is being conducted by the US Geological Survey. Artesian wells at Wood River Wetland are being monitored as part of a larger Klamath basin ground water study. Information on origin, water levels and discharge is being collected.

### **Prescribed Fire**

#### Baldy Crest

The BLM initiated a prescribed burn adjacent to the Old Baldy RNA, which is administered jointly by the BLM Klamath Falls Resource Area (Lakeview District) and Ashland Resource Area (Medford District). The fire was allowed to burn into the Klamath County portion of the Old Baldy RNA. Prescribed fire effects monitoring plots were established in FY 99 according to protocols developed by the National Park Service. Pre-burn data were collected



by a researcher from the Oregon Natural Heritage Program (ONHP). Additional prescribed fire effects monitoring plots were established in the fall of 2001 to measure dead and downed fuel loads before the burn. In the summer of 2002, vegetation transects were installed at 15 locations to describe cover of species. Nine stand exams were installed to get pre burn data on tree condition and age. The prescribed fire originally planned for FY 2000 in the RNA was implemented in 2003. Resurveys were conducted after the 2003 ignitions and will be conducted in subsequent years. Analysis will describe changes in cover and frequency of species, fuel loading, organic soil layers, and tree mortality.

## **32.0 Coordination and Consultation**

### **Federal Agencies**

During the period of June 1995 through September 2002, BLM has increased its cooperative efforts with other federal agencies. The BLM has been very involved with the U.S. Fish and Wildlife Service, U.S. Forest Service, Environmental Protection Agency, U.S. Geological Survey, Bureau of Reclamation, and National Resource Conservation Service on projects such as watershed analysis, water quality improvement projects, and the Wood River Wetlands Restoration Project. In addition, personnel from these agencies have been involved in planning, conflict resolution, and Section 7 consultation under the Endangered Species Act.

The Regional Interagency Executive Committee, Klamath Provincial Advisory Committee, Klamath Basin Ecosystem Restoration Office, and the Regional Ecosystem Office, established under the Northwest Forest Plan, have increased BLM's interagency role as well.

#### **U.S. Fish and Wildlife Service**

##### **Bear Valley National Wildlife Refuge**

The first forest health treatment in the Bear Valley National Wildlife Refuge was completed in November of 1999. The first treatment was a 245 acre timber sale that focused primarily on maintaining and improving bald eagle nesting and roosting habitat. The treatment consisted of thinning primarily the overstocked understory trees to improve the resiliency of the remaining trees and reduce the risk of stand replacing wildfires. The first follow-up prescribed burn was implemented in the fall of 1999 in areas that had been harvested to reduce remaining fuel loads. In addition to the habitat treatments, some road improvements and road decommissioning occurred along with replacement of an access bridge. In FY 2003, a second timber sale of 1040 acres was sold. The treatment is scheduled for implementation in 2004/2005.

##### **Wood River Wetlands**

The USFWS and the BLM, through a memorandum of understanding, have shared specialists to complete both restoration work in the refuge as well as wetland restoration work at Wood River. In FY 2003, USFWS crews repaired 1.5 miles of levee and USFWS personnel conducted waterfowl monitoring flights September through May.

#### **Klamath Basin Ecosystem Restoration Office**

The Ecosystem Restoration Office (ERO) is an interagency office, which is operated cooperatively by the U.S. Fish and Wildlife Service, Bureau of Reclamation, U.S. Forest Service and the BLM. This interagency office provides funding, technical assistance, and monitoring for watershed restoration projects which are proposed by private landowners, private and public organizations and agencies, and the Upper Klamath Basin Working Group. The ERO works closely with the Klamath Basin Provincial Advisory Committee and watershed councils within the Klamath Basin. BLM has helped support this office since 1997.

## **State of Oregon**

The Klamath Falls Resource Area has continued its long term working relationship with Oregon Department of Forestry, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture, Oregon Parks and Recreation Department, State Historic Preservation Office, and the Oregon Department of Environmental Quality. BLM has participated with these agencies in diverse activities such as recreation and timber sale planning, fish habitat inventory, water quality monitoring and TMDL development, noxious weed management, hazardous material cleanup, air quality maintenance, and wildfire suppression.

## **Counties**

The Klamath Falls Resource Area (KFRA) is located within Klamath County. There is frequent communication between the KFRA and county commissioners and other county staff. This communication involves BLM proposed projects, county projects that may affect county lands, water quality issues, noxious weeds and other issues. County Commissioners receive copies of all major publications, project updates and project proposals.

## **Cities**

The KFRA works with staff from the City of Klamath Falls and other outlying communities (Bonanza, Bly, Lorella, Keno, etc.) in the areas where BLM lands adjoin city limits. On a regular basis, personnel from the Klamath Falls Resource Area attend a ten month long Leadership Klamath training which gives participants an overview of the history, workings, and interrelationships of city and county government and reviews services and relationships to private, state, and federal agencies.

## **Tribes**

Tribes are represented on the Southeast Oregon Provincial Interagency Executive Committee, which coordinates activities within the province. The KFRA contacts the Klamath Tribes directly for coordination of many projects by presenting projects to the Tribal Council and by meeting bimonthly with the Klamath Tribes Culture and Heritage Department. The Lakeview District is in the process of developing a Memorandum of Understanding (MOU) between the BLM and the Klamath Tribes. It is anticipated the MOU will be finalized in FY 2003. As mentioned above, the BLM is working with numerous tribes on FERC relicensing and development of the Klamath River Management Plan.

## **Watershed Councils**

There is ongoing participation with the Klamath Watershed Council and associated Working Groups. The BLM is represented on the Councils' Technical Advisory Committee and participates in cooperative activities that can benefit public lands. The council is active in coordinating watershed and water quality enhancement projects on private lands.

### **Upper Klamath Basin Working Group**

The BLM is also involved in the Upper Klamath Basin Working Group. The working group was appointed by Senator Mark Hatfield in 1995 and authorized by Congress under the Oregon Resource Conservation Act. The senator's charge for the group was to identify short



and long term solutions to issues in the Upper Klamath basin. Specifically he asked the group to address:

- Ecosystem restoration and water quality
- Economic stability
- Reducing drought impacts

The working group was designed to be citizen-led. Two non-agency members serve as co-chairs. The membership totals 33, including representatives from — the Klamath Tribes (3 members), the city of Klamath Falls, Klamath County, Oregon State government (2 members), the Soil and Water Conservation district, Oregon Institute of Technology, the environmental community (4 members including a California representative with refuge interests), local businesses (4 members including the wood products industry and commercial and recreational fisheries), the ranching and farming community (4 members), and the local community (4 members). In addition, there are representatives from eight federal agencies — U.S. Fish and Wildlife Service, the Bureau of Reclamation, the Bureau of Land Management, the Bureau of Indian Affairs, the U.S. Forest Service, the Natural Resource Conservation Service, and the national Marine Fisheries Service.

The working group meets regularly to address issues, and propose and seek out grants for projects that promote ecosystem restoration.

## **Chartered Advisory Groups**

### **Klamath Provincial Advisory Committee**

The purpose of the Klamath Provincial Advisory Committee (PAC) is to advise Federal agency representatives on implementation of the Record of Decision for Amendments to the Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (ROD) of April 13, 1994. The agencies represented make up the Provincial Interagency Executive Committee (PIEC) that facilitates the successful implementation of the ROD. The PIEC consists of representatives of some or all of the following Federal agencies: the Forest Service, Bureau of Land Management, Fish and Wildlife Service, National Marine Fisheries Service, Bureau of Indian Affairs, National Park Service, and Environmental Protection Agency. The PAC provides advice regarding implementation of a comprehensive ecosystem management strategy for Federal land within the Klamath province (from the Klamath Basin to the California coast). The PAC provides advice and recommendations to promote better integration of forest management activities among Federal and non-Federal entities to ensure that such activities are complementary.

The Upper Basin Subcommittee was created to provide advice and to assist the BLM interdisciplinary team by gathering information from private river users, local private landowners, and other interested parties, to be used throughout the Klamath River planning process.

### **Southeast Oregon Resource Advisory Council**

The Council's objectives and scope are to provide representative citizen counsel and advice to the Bureau of Land Management (BLM) and the U.S.D.A. Forest Service (FS) line managers concerning the planning and management of the public land and national forest resources located in whole or in part within the Vale, Burns, and Lakeview Districts of the BLM and the Fremont, Deschutes, Ochoco, and Malheur National Forests. The actual jurisdictional boundary is described includes the Middle Snake/Boise, Oregon Closed Basins, and Goose Lake Hydrologic Units, as described by the United States Geological Survey, are contained within this jurisdictional area. This area includes most of Malheur, Harney, and Lake Counties and very small portions of Klamath, Deschutes, Crook, Grant, and Baker Counties. Although none of the resource area lands are within the boundaries of the RAC, project coordination occurs at the Lakeview District level.

## **Medford District Resource Advisory Committee**

The BLM makes "Payments in Lieu of Taxes" and O&C Payments to states that in turn distribute the money to county governments. Public Law 106-393, the Secure Rural Schools and Community Self-Determination Act of 2000, signed October 30, 2000 established a new formula for calculating payments, which is based on selecting the highest three years in the eligibility period (1986-1999). The law also allows for annual increases in the payment based on Consumer Price Index information. Klamath County elected to receive payments under the new legislation. Beginning in Fiscal Year 2001 and continuing through 2006 payments are to be made based on historic O&C and CBWR payments to the counties. The Forest Service and BLM submit proposed projects to the counties to some of the money on federal lands. The Jackson-Klamath County Resource Advisory Council meets to evaluate and prioritize projects and distribute funding.

## **Other Local Coordination and Cooperation**

### **Klamath-Lake Forest Health Partnership**

A partnership was created in 1995 to promote forest health in Klamath and Lake Counties. This included private industrial and nonindustrial landowners, The Nature Conservancy, Chiloquin Visions in Progress, Klamath Ecosystem Education Partnership, consulting foresters, county, state, and federal agencies who work together on problem solving, sharing science and information, and providing assistance to small woodland owners. The KFRA is a member of this active partnership that meets monthly.

### **Klamath-Lake-Modoc-Siskiyou Outdoor Recreation Working Group**

This working group was formed in 1991. This is a multi-county organization, which covers portions of southern Oregon and northern California. This working group provides a forum where private businesses, city, county, state, and federal agencies communicate, plan, and implement recreational and tourism activities. BLM is an active participant.

Major accomplishments have been the development of 19 outdoor recreation brochures, the construction of 50 highway rest stop displays in locations in California and Oregon, and developing tear-off sheet maps that highlight outdoor recreational activities. The brochures and tear-off maps are used in motels, restaurants, and other businesses to promote outdoor recreation and tourism in the four-county area. Representatives from this group also meet quarterly with the county commissioners from each county to share information and receive new ideas.

### **Klamath Basin Water Adjudication Resolution Process**

The Oregon Water Resources Department (OWRD) initiated the Klamath Basin Adjudication in 1975. The Klamath Adjudication is an Oregon general water claim adjudication in which the final decree will be issued by the Klamath County Circuit Court. All Adjudication claims were filed with the OWRD by April 1997. The Adjudication is the first Oregon general water adjudication in which complex federal claims have been filed.

Given the complexity of the Adjudication and other water allocation issues in the Klamath Basin, the OWRD has initiated a voluntary alternative dispute resolution process to provide a forum to address Adjudication claim issues and other matters related to water supply and demand in the Klamath Basin. The BLM is an active participant in the adjudication process.

### **Coordinated Resource Management Plans (CRMP)**

Coordinated resource management planning involves resource owners, managers, users, and specialists, concurrently formulating and implementing plans for the management and use of all natural resources and ownerships within a specific area. The group established through



the planning effort provides a forum to help resolve resource conflicts. The KFRA is involved in four Coordinated Resource Management Planning areas: the Yainax, Spencer Creek, Rock Creek and Gerber-Willow Valley areas.

### **Yainax CRMP**

The Yainax Butte CRMP was originally completed in 1974 in conjunction with the United States Forest Service (USFS), Oregon Department of Fish and Wildlife (ODFW), Oregon Department of State Lands (ODSL), Oregon Department of Transportation (ODOT), Klamath County Extension Service, Natural Resource Conservation Service (NRCS), Weyerhaeuser, and the common grazing permittee. In 1993, the plan was completely revised with the same group of organizations and a new grazing permittee. The revised plan is still in effect and being followed by the current grazing permittee (different than in 1993) and the successor to Weyerhaeuser - US Timberlands. The Yainax Butte CRMP addressed a myriad of issues including grazing, forestry, recreation, wildlife, T&E species, private land and cultural issues. The CRMP coordinates the management of the area to accomplish a broad range of resource goals and uses.

### **Spencer Creek CRMP**

This CRMP was developed in 1990 and was updated in 1994. The planning group is made up of county, state, and federal agency personnel and private landowners who coordinate watershed enhancement and other projects within the Spencer Creek Watershed.

### **Rock Creek CRMP**

The BLM's Rock Creek allotment is included in the broader Warm Springs Coordinated Allotment Management Plan. This plan was originally completed in 1983 with the Modoc National Forest (NF), Fremont National Forest, and the common permittee, and establishes resource objectives and institutes a grazing system to address the resource issues. The Warm Springs Coordinated Plan is in the process of being revised with the Modoc NF taking the lead, as they are the majority land administrator.

### **Gerber/Willow Valley CRMP**

Development of this plan began in FY 2000. The first objective is to complete a joint watershed analysis on two 5<sup>th</sup> field watersheds (Gerber and Willow Valley) with BLM, Forest Service and private landowners participating. Federal agencies involved are the Klamath Falls Resource Area, Fremont National Forest, and Modoc National Forest (California). Following completion of the watershed analysis, which is expected in FY 2003, a coordinated resource management plan will be developed to include concerns and opportunities that adjacent private landowners have for improving their lands within the analysis area boundary.

### **Pokegama Working Group**

This working group was formed in 1991 to coordinate projects to improve habitat in big-game winter range and reduce harassment of wildlife during critical winter months. This group has been active in informing and educating the public of the critical habitat needs for deer and elk. Members of this group include US Timberlands, PacifiCorp, Oregon Department of Fish and Wildlife, and the BLM.

### **Intermountain West Joint Venture (IWJV)**

The IWJV was formed in 1995 and covers eastern Oregon and parts of nine other western states. This group meets quarterly and has written an area plan with input by local Federal and State agencies, and private organizations to determine conditions of wetlands and identify opportunities to improve habitat. Oregon Wetlands Group hired a private consultant to write the plan that focuses on the Klamath Basin eco-region. This plan, as well as other eco-region plans within the ten western states, follows the guidelines outlined under the North American Wetlands Conservation Act of 1989. The representatives for the Klamath Basin eco-region are BLM, Ducks Unlimited, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Modoc National Forest, California Fish and Game, and Oregon Joint Venture. Wood River Wetland restoration is part of the completed plan.

**Table 32.1 - Challenge Cost Share Fiscal Year 2003**

<u>Project Name</u>	<u>BLM Contribution</u>	<u>Partner Contributions</u>
Bitterbrush Planting	\$15,000	\$37,000
Avian Population Monitoring in Upper Klamath Basin	\$46,000	\$60,000
Northern Spotted Owl Telemetry Survey	\$60,000	\$50,000
Oak Thinning	\$6,000	\$6,000
Road Closures	\$20,000	\$20,000
<u>Pogogyne floribunda Conservation Strategy</u>	<u>\$9,000</u>	<u>\$9,000</u>
TOTALS	\$156,000	\$182,000

## 33.0 National Environmental Policy Act Analysis and Documentation

### NEPA documentation

The review of the environmental effects of a proposed management action can occur in any of four ways: administrative determination, categorical exclusion, environmental assessment, or environmental impact statement.

An administrative determination is made when NEPA documentation previously prepared by the BLM fully covers a proposed action and no additional analysis is needed (see Table 33.1). This procedure is often used in conjunction with a plan conformance determination. If a proposed action is fully in conformance with actions specifically described in the RMP and analyzed in the RMP/FEIS or a subsequent environmental assessment, a plan conformance determination may be made and no additional analysis is needed. This determination is documented in a "*Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)*".

Some projects may qualify for a categorical exclusion from further NEPA documentation. Numerous types of projects have been determined that the nature and scope of the proposed activities do not individually or cumulatively have significant environmental effects on the environment. Specific categories of projects may therefore be exempt from requirements to prepare an environmental analysis. Categorical exclusions (CX) are covered specifically by Department of Interior and BLM guidelines.

An environmental assessment (EA) is prepared to assess the effects of actions that are not exempt from NEPA, are not categorically excluded, and are not covered by an existing environmental document. An EA is prepared to determine if a proposed action or alternative will significantly affect the quality of the human environment.

Major proposals that will significantly affect the environment, and that have not been previously analyzed through an environmental impact statement (EIS), require that an EIS be prepared.

### Klamath Falls Resource Area Environmental Documentation

In FY 2003, twelve categorical exclusions, sixteen Plan Conformance/Determinations of NEPA adequacy, and four environmental assessments were completed. The resource area continued work on the environmental impact statement for the Upper Klamath River ACEC and River Management Plan. Table 33.1 shows the number of NEPA documents completed since FY 1995.



## Protests and Appeals

One protest has been received since the Klamath Falls Resource Area Management Plan Record of Decision was approved in 1995. This protest, involving a proposed grazing use, is still on hold, pending a final decision. In FY 2002, the KFRA received an appeal on a decision to implement a juniper removal vegetation treatment. The appeal is still pending.

**Table 33.1 - NEPA Analyses and Documentation Fiscal Year 2003**

	<u>FY 2003</u>	<u>FY 95-03</u>
Categorical Exclusions	12	198
Plan Conformance and Determinations of NEPA Adequacy	16	128
Environmental Assessments/FONSI	4	39
Environmental Impact Statements	(3- in progress)*	---
Activity Level Plans	0	---
Resource Management Plan Amendments	0	1

\*Upper Klamath River Management Plan, Proposed Raising of Gerber Dam, California/Oregon Border Cogeneration Plant

## 34.0 Plan Evaluation

### Third Year Evaluation

The BLM performed a third year evaluation of implementation of the RMP. An executive summary of the resource area evaluation is available, free of charge, upon request, or is accessible "on-line" at the Klamath Falls Resource Area website: <http://www.or.blm.gov/Lakeview/kfra/index.htm>.

### Eighth Year Evaluation

The third year evaluation of the Klamath Falls Resource Area Resource Management Plan by Oregon State Office staff has been completed. The purpose of the third year evaluation was to determine whether there is cause for an amendment or a revision to the resource management plan. This evaluation includes reviewing cumulative monitoring results and accomplishments, determining if the plan's goals or objectives are being met, determining whether goals and objectives were realistic and achievable in the first place, and determining whether changed circumstances or new information have altered activities or expected impacts. Evaluations are usually done after the third year of implementation under the RMP, but because of unforeseen problems, release of the third year evaluation for years 1995-1998 was delayed, and not released until 2001.

On July 31, 2001, the Oregon/Washington State Director, Bureau of Land Management (BLM), released the following findings based on the Third Year Plan Evaluation for the Lakeview District (Klamath Falls Resource Area).

*"Based on this plan evaluation which included information through Fiscal Year 1998, I find that the Klamath Falls Resource Area RMP goals and objectives are being met or are likely to be met, and that the environmental consequences of the plan are similar to those anticipated in the RMP FEIS, and that there is no new information, as of September 30, 1998, that would substantively alter the RMP conclusions. Therefore, a plan amendment or plan revision of the RMP is not warranted. This document meets the requirements for a plan evaluation as provided in 43 CFR 1610.4-9."*

## 35.0 Plan Maintenance

The Klamath Falls Resource Area Management Plan Record of Decision was approved in June of 1995. Since that time, the Klamath Falls Resource Area has implemented the plan across the entire spectrum of resources and land use allocations. As the plan is implemented it sometimes becomes necessary to make minor changes, refinements or clarifications of the plan. Potential minor changes, refinements or clarifications in the plan may take the form of maintenance actions.

Maintenance actions respond to minor data changes and incorporation of activity plans. This maintenance is limited to further refining or documenting a previously approved decision incorporated in the plan. Plan maintenance will not result in expansion of the scope of resource uses or restrictions or change the terms, conditions and decisions of the approved resource management plan. Maintenance actions are not considered a plan amendment and do not require the formal public involvement and interagency coordination process undertaken for plan amendments.

Important plan maintenance will be documented in the Klamath Falls Resource Area Planning Update and Annual Summary. Examples of possible plan maintenance issues that would involve clarification may include the level of accuracy of measurements needed to establish riparian reserve widths, measurement of coarse woody debris, etc. Much of this type of clarification or refinement involves issues that have been examined by the Regional Ecosystem Office and contained in subsequent instruction memos from the BLM Oregon State Office. Depending on the issue, not all plan maintenance issues will necessarily be reviewed and coordinated with the Regional Ecosystem Office or Provincial Advisory Committee. Plan maintenance is described in the Klamath Falls Resource Area Management Plan Record of Decision.

### Plan Maintenance for fiscal year 1995

- REO memorandum dated 10/13/94: Memo reviewing BLM's interpretation of Coarse Woody Debris requirements.
- REO Memorandum dated 3/22/95: Memo reviewing BLM site potential tree height determination.
- REO Memorandum dated 4/7/95: Clarifies access for key watersheds, how to meet S&G for no net increases in roads where third parties have access rights.
- REO Memorandum dated 7/5/95: Interagency memo exempting certain silvicultural activities from LSR assessment requirements.
- BLM IM OR-95-123, dated 7/5/95: Memo clarifying when watershed analysis is and is not required for activities in Riparian Reserves.
- REO Memorandum dated 7/24/95: Memo changing status of dwarf mistletoe in Table C-3 of the ROD.
- REO Memorandum dated 8/31/95: Memo on LSR boundary adjustments.

### Plan Maintenance for fiscal year 1996

- REO Memorandum dated 12/15/95: Memo clarifying REO review of LSR assessments.
- Memo on protocols for Survey & Manage amphibians (BLM IB-OR-96-006, dated 3/19/96).
- REO Memorandum dated 4/26/96: Additional Guidance on LSR assessment reviews.
- REO Memorandum dated 6/11/96: Memo changing provisions regarding management of the lynx.
- Memo implementing Regional Ecosystem Office memo on management of lynx (BLM IM-OR-96-97, dated 6/28/96)
- Memo on plan maintenance (OR IB-OR-96-294, dated 7/5/96)
- REO Memorandum dated 7/9/96: Memo exempting certain commercial thinning projects



in LSRs and MLSAs from REO review.

- Internal Memorandum No. OR-96-108 (dated July 26, 1996) instructed the Klamath Falls Resource Area to remove Buxbaumia piperi, a moss that was erroneously listed as a species considered at risk in the Northwest Forest plan. This removal was deemed necessary B. piperi is not considered to be rare, therefore the standards and guidelines from the Northwest Forest Plan were applied in error.
- Memo on dwarf mistletoe (BLM IB-OR-95-443, dated 8/15/96)
- REO Memorandum dated 9/6/96: Draft memo limiting surveys for certain arthropods to southern range.
- REO Memorandum dated 9/30/96: Memo amending commercial thinning exemption in LSRs.

## Plan Maintenance for fiscal year 1997

- BLM IM-OR-97-007, dated 11/1/96: Interagency Memo clarifying implementation of S&M component 2 species; contains definitions of S&G terms such as “ground disturbing” and “implemented”.
- Memo directing changes in surveys for arthropods (BLM IB-OR-97-045, dated 11/8/96.
- Memo on implementing Coarse Woody Debris Standard & Guide (BLM IB-OR-96-064, dated 11/19/96.
- Memorandum dated November 8, 1996: Northwest Forest Plan Record of Decision (ROD). The sentence “Understory and forest gap herbivores” (page 61) was changed to be specific to the south range.
- Northwest Forest Plan, Adjustments in the Great Gray Owl (GGO) Survey Protocol. These adjustments were recommended by the Research and Monitoring Committee subsequent to findings and recommendations of a science panel. The six recommendations for the 1997 survey season were incorporated into the May 12, 1995 version of the protocol. In addition, habitat occupancy are to be located in habitat with the highest likelihood of supporting nesting Great Gray Owls. Methods, locations, and timing of habitat occupancy surveys are at the discretion of the resource area. Among the recommendations is one acknowledging that, using the onset of snowmelt to determine the start of the survey season, may not allow completion of all four visits prior to May 15. However, there should still be a good faith effort put forth to complete the four visits between March 15 and may 15, even if they go past the specified time period. A total of six visits is still required. In southwestern Oregon, some Great Gray Owls have been found below 3,000 feet elevation. Although not a requirement at this time, surveys below 3,000 feet (but otherwise according to protocol) will both assist in maintaining species viability and provide important data for evaluation of the GGO Record of Decision requirements. Field offices should assess which, if any, lower elevation locations would be priority areas to survey given the existing workload, staffing, and funding.
- In 1997, the Klamath Falls Resource Area developed some criteria to use to select the “16-25 large green trees per ace...” for retention in a harvest unit. As of 1997, the Klamath Falls Resource Area was still trying to determine which prescription/harvest unit this standard and guideline was intended for (Density Management, Regeneration Harvests, Commercial Thinnings, Patch Cut, etc.). (See 1999 Plan Maintenance for clarification).
- The 1997 APS stated: Klamath Falls Resource Area RMP, Timber Resources, Page 56, Unscheduled Harvests, 4<sup>th</sup> paragraph, “On the Westside, retain 16 to 25 large green trees per acre in harvest units”. This plan maintenance clarifies that harvest units, prescription units, and treatment units are the same thing. For each prescription unit, stand exams will be conducted to determine existing stand structure. Unit reports will show, by species: basal area, crown closure, and the average number of trees per acre by diameter class. The number of snags and amount of coarse woody debris will also be determined. A prescription unit average of at least 16 green trees from the larger size classes present within the unit will be retained. Criteria for retention will be:
  - Species:** Tree species naturally adapted to the site, especially those species presently under-represented (usually ponderosa pine, Douglas-fir, and sugar pine).
  - Condition:** Vigorous trees and other trees in any condition having special habitat characteristics. This mix, will ideally supply overstory structure, as well as a variety of

a snags and logs in a various decay classes over an extended time period.

-**Size:** Trees from the larger size classes of a given unit. (The size and density of trees vary tremendously, however. The largest trees in some units do not exceed 14 inches DBH; others have many trees over 30 inches DBH).

## Plan Maintenance for fiscal year 1998

- Guidance on Implementation of the 15 percent retention Standard & Guideline: Joint BLM/Forest Service final guidance, which incorporated the federal executives' agreement, was issued on September 14, 1998, as BLM-Instruction Memorandum No. OR-98-100. The memorandum emphasizes terminology and intent related to the Standards and Guidelines, provides methods for completing the assessment for each fifth field watershed, dictates certain minimum documentation requirements, and established effective dates for implementation. This Instruction memorandum is adopted in its entirety as RMP clarification.
- Survey Protocols for Survey and Manage Species: Final protocols were issued during FY98 for Component 2 lichens, the fungus *Bridgeoporus nobilissimus*, terrestrial mollusks, and aquatic mollusks. These protocols are adopted in their entirety as RMP clarification.
  - Environmental Justice: Executive Order 12898 of February 11, 1994: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations directs all federal agencies to "...make achieving environmental justice part of its mission by identifying and addressing...disproportionately high and adverse human health or environmental effects of its programs, policies and activities."
  - New projects with possible effects on minority populations and/or low-income populations will incorporate an analysis of Environmental Justice impacts to ensure any disproportionately high and adverse human health or environmental effects are identified and reduced to acceptable levels, if possible.
  - Copies of the Executive Order, the accompanying Memorandum for the Heads of All Departments and Agencies, and Council on Environmental Quality Guidance on Environmental Justice issued February 1998 can be requested from the Klamath Falls BLM office.

## Plan Maintenance for fiscal year 1999

- Correction of numerous errors or updates to Appendix H - "Grazing Management and Rangeland Program Summary" of the KFRA ROD/RMP (pages H-1 through H-77).
  - Page H-5, Chase Mountain Allotment (0101); Page H-7, Edge Creek Allotment (0102) and Buck Mountain Allotment (0103); Page H-10, Dixie Allotment (0107); Page H-11, Dry Lake Allotment (0140); and H-13, Grubb Springs Allotment (0147). Under the "Constraints" sections, change "Weyerhaeuser Company" to "U.S. Timberlands, Inc.". This reflects the 1986 change in ownership for all of these private, intermingled lands.
  - Page H-26, JELD-WEN allotment (0824). Due to land exchanges, the "Public Acres" should be changed from 360 to 240. Also, the "Active Preference", "Total Preference", and "Total" under the "Grazing Administration Info (AUMs)" column should be changed from 36 to 24.
  - Page H-32, *Kethcham* allotment (0835). Name should be spelled **Ketcham**.
  - Page H-51, Campbell allotment (0878). "Suspended nonuse" should be 13 AUMs instead of 12; "Total Preference" should be 60 AUMs instead of 59.
  - Page H-56, Dry Prairie allotment (0885). "Exchange of Use" AUMs should be changed from 275 AUMs to the "30 AUMs permanent AUMs, although the total number is variably higher depending on private land leases in the Dry Prairie pasture".
- "Corrections of errors or updates to Klamath Falls Resource Area RMP Appendix H, Grazing Management....."



- Page H-56, Dry Prairie allotment (0885). Under "Grazing Administration Info. (AUMs)" the "Active Preference" should be changed from 608 to 642 AUMs, and the "Suspended Nonuse" should be changed from 392 to 358 AUMs. This change reflects the transfer of state lands to public ownership in 1988 that was not previously reflected on the grazing permits.
- Additional information to the Grazing Management section of the ROD/RMP dealing with the recently implemented Standards for Rangeland Health.
  - KFRA ROD/RMP, Page 62-63, "Grazing Management", "Management Actions/Direction", "General" section. The following should be added after the 5<sup>th</sup> paragraph (one on Standards and Guidelines): Recently (August 12, 1997), the "Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public lands Administered by the Bureau of Land Management in the States of Oregon and Washington" was implemented. This and related guidance requires that all grazing lands be assessed to see if the grazing use meets the 5 Standards for Rangeland Health. These standards address watershed function in uplands; watershed function in riparian areas; ecological processes; water quality; and native, threatened and endangered, and locally important species. This guidance will be effected in accordance with the KFRA's "Plan for the Implementation of Standards and Guidelines" dated October 29, 1998 (available upon request).
- Additional support for the Appropriate Management Level (AML) of 30-50 head for the Pokegama Herd Management Area (HMA).
  - KFRA ROD/RMP, Page 64, "Wild Horse Management", "Management Actions/Directions" section. Additional support information should be added after the second paragraph as follows:
    - The Lakeview District Wild Horse Gather Environmental Assessment (OR-010-95-10) and the Topsy-Pokegama Landscape Analysis (July 1996) both affirmed that the wild horse herd should be kept within the 30-50 head AML as proposed in the ROD/RMP. This level is necessary to "...ensure a thriving natural ecological balance... and protect the range from deterioration associated with overpopulation" as stated in this plans objectives for Wild Horse Management and required by the Wild Free-Roaming Horse and Burro Act of 1971. 20 head were removed from the HMA in 1996 in order to get the herd number down within the AML.
- Klamath Falls Resource Management Plan, Appendix K, Water and Soils, Page K-8, Implementation Monitoring Question #12 is not stated correctly. Add the word "coordinated" before the word "watershed-based". Thus, the first part of the question should read: "What is the status of cooperation with other agencies in the development of coordinated watershed-based Research Management Plans and other cooperative agreements to meet Aquatic Conservation Strategy Objectives?"
- In the RMP dated June 1995, The section on energy and minerals refers to restrictions listed in appendix "G" located in volume II of the Final KFRA RMP & EIS. **This should refer to appendix "K" in Volume II.**
- Appendix "G", pages 12-13 in the Final KFRA RMP/ROD, dated September 1994, failed to give exact distant measurement for the buffers associated with the timing limitations for bald and golden eagles, osprey and sage grouse leks. **The sentence should read** " Surface occupancy and use is prohibited . . . , within 1/4 mile of known . . . sites.
- Appendix G, KFRA/ROD, pages 12 and 13 **Add:** Timing Limitation, Resource: Wildlife - Northern Spotted Owl, Stipulation: Surface occupancy and use is prohibited from March 1 to August 15, within 1/4 mile of known Northern Spotted Owl nest sites and nesting habitat.
- In same document and same appendix on page G-15, the controlled surface use for the Upper Klamath River - segment 2 should also state "1/4" mile.
- Change in specific provisions regarding management of the great gray owl. The NFP Record of Decision page C-21; Klamath Falls Resource Area RMP Record of Decision pages 39 & 40.
- The NFP states the following with regard to management: "Specific mitigation measures

for the great gray owl, within the range of the northern spotted owl, include the following: provide a no-harvest buffer of 300 feet around meadows and natural openings.....”

- For the Topsy/Pokegama Landscape Analysis Area, the Klamath Falls Resource Area wrote a Late Successional Reserve Assessment (LSRA) which addressed a variety of habitat manipulations for the long-term enhancement of great gray owl nesting habitat within the 300-foot buffers required around meadows and natural openings. These habitat manipulations were proposed in areas where the following conditions are present: 1) marginally suitable as great gray owl habitat, 2) at risk of decline to the point where suitable nesting habitat conditions are unattainable in the long-term, and 3) at risk due to poor forest health conditions including high fuel loads and/or overstocking.
- As a result of discussions in 1999 between members of the Regional Ecosystem Office Team and the Klamath Falls Resource Area Staff, meadows and natural openings would be buffered only in cases where it has been determined the area is “occupied” by great gray owls. Occupancy is defined in the May 12, 1995, great gray owl survey protocol. Forested areas adjacent to meadows and natural openings would receive 300-foot buffers within approximately two miles from activity centers of sites occupied by great gray owls.
- A Memorandum from the Executive Director to the State Director dated August 4, 1999, served as documentation of the Regional Ecosystem Office’s (REO) review of the Late Successional Reserve Assessment and finding that the LSRA provides a sufficient framework and context for future management activities within the 300-foot meadow buffers in the Topsy/Pokegama Landscape Analysis Area.
- On pages 23, 33 & 56 of the KFRA RMP, for Westside Matrix lands, Management Actions / Directions states:  
*“Retain 16 to 25 large green trees per acre where available.”*  
To be consistent with the Medford RMP, Chapter 2-21, the KFRA will change the wording in the KFRA RMP to read:  
*“Retain at least 16 to 25 large<sup>1</sup> green trees per acre in regeneration harvest units.”*

### **Rationale for change:**

The proposed change will help clarify when the KFRA must meet the 16-25 standard and guide (S&G). It was noted during the 3<sup>rd</sup> year evaluation that there was a difference in the wording and subsequent interpretation between the Medford District and the KFRA RMPs relating to this S&G. The Medford District applies this S&G to regeneration harvest units only. The word “regeneration” was left out of the KFRA RMP. Subsequently, KFRA personnel interpreted this S&G to be applied to all types of harvest units including density management harvests. The KFRA has completed four density management harvests to date and posttreatment stand exam data indicates that over 200 trees per acre are being retained including the larger and more vigorous trees. BLM Managers feel that this S&G is not applicable nor was it intended for density management harvests and should only be applied to regeneration harvest units as defined in the Medford RMP. Presently, the KFRA has not implemented any regeneration harvests. The 16 to 25 tree S&G in regeneration harvest units should be sufficient to meet the intended objectives of structural retention for both a legacy component as well as serve as a shelterwood for the understory component. In addition, this change will align with how these stands were initially modeled.

- On pages 23, of the KFRA RMP, for Westside Matrix lands, Management Actions / Directions states:  
*“When an area is regeneration harvested, limit patch size to 3 acres.”*

The above sentence erroneously includes the word “regeneration” where “density management” was intended. The KFRA will modify the patch cut size limit from 3 acres to 5 acres. The limit on patch cuts to 15% or less of the density management harvest area,



which was intended, and was used in modeling, was not mentioned in the RMP. Therefore, the correct wording for this maintenance should be modified to read:

*“Patch cuts within a density management unit are limited to 5 acres in size and to no more than 15% of the density management treatment area.”*

### **Rationale for Change:**

A clarification is needed between patch cuts and regeneration harvests. Patch cuts are small openings in relatively large density management units. The primary objective of cutting small patches/openings is to regenerate under-represented species in the stand; normally pines and Douglas-fir. Due to past harvesting practices and fire suppression, the species composition of stands has trended from shade intolerant species (pines and Douglas-fir) towards stands dominated by tolerant species (white fir). On page E-10 (Appendix E) of the RMP, Table E-1 lists the “Desired Species Composition (by percent conifer basal area)” for the South General Forest Management Area (SGFMA). The RMP states on page E-10 that the KFRA is to “Manage so that trees species over time trend toward ...” these composition levels. One of primary reasons for this objective is to improve the resiliency of the stands to natural disturbances (insects, disease, and fire). The small patch cuts are one of the prescriptions the KFRA is using to meet the species composition objective.

The amount of patch cuts that can be implemented in a density management unit is not changing. The limit, as modeled, has always been and will remain up to 15% of the unit. However, because the 15% limit has never been documented, it was necessary to add that statement as well. The size is increasing from 3 acres to 5 acres to insure that sufficient sunlight is reaching the younger seedlings and is not impacted by the shade from the patch cut edge. To date, approximately 72 acres (2.3%) of 3072 acres of density management treatments have received patch cuts.

- **Clarification of What a Regeneration Harvest Is, and the Constraints Involved When Implementing.**

A regeneration harvest is a silvicultural system discussed in a number of places in the RMP. The partial objective of regeneration harvests (See Glossary, page 6-14, Vol. 1 of the FEIS) is to open “a forest stand to the point where favored tree species will be reestablished.” There are two constraints to regeneration harvests. The first is mentioned in Appendix E, page E-10 of the RMP that states, “Regeneration harvests would not be programmed for stands under 120 years of age and generally would not be programmed for stands under 150 years of age within the next decade unless required by deteriorating stand condition, disease, or other factors that threaten the integrity of the stand.” The second constraint relates to the Plan Maintenance items mentioned above that states; retain at least 16 to 25 large green trees per acre in regeneration harvest units. The KFRA projected 131 acres of regeneration harvests on the Westside and 33 acres on the Eastside. To date, no regeneration harvests have been implemented due to placing priority on mortality salvage sales.

- **Clarification of Snag Classification**

During a timber sale review in KFRA in fiscal year 1999, the initial posttreatment stand exam data indicated that not enough Class 1 & 2 snags were retained. The stand exam data was surprising because many snags were intentionally marked for removal as required in the silvicultural prescription due to an already abundant down fuels load and snags at the time of marking. A review of the posttreatment stand exam data revealed that a snag was only classified as Class 1 or 2 if it had just died and/or still had red needles on it (1-2 years old). All other snags were classified as Class 3, 4, or 5. The KFRA determined that it needed a standardized format for classifying snags. The BLM Forest Survey Handbook, BLM Manual Supplement 5250-1, pages IV-10 to IV-12 was reviewed to determine if it

was sufficient for classifying snags. The handbook provides both pictures and descriptions of the different snag categories. The KFRA concluded that the handbook would be sufficient for classifying snags for future monitoring purposes.

## Plan Maintenance for fiscal year 2000

- Page I-7, KFRA RMP, Appendix I - Land Tenure,

**Delete:** Remove the following lands from Land Tenure Zone 3 and place them into Land Tenure Zone 1.

T.36 S., R.15 E. W.M.; Sec. 28 (all); Sec. 32 (all).

**Rational for Change:** The presence of the endangered species, cinder pit, and wetlands associated with Campbell Reservoir on the public lands preclude the BLM from making the finding that the resource values on the federal land are less than the resource values of the private land.

- Page #\_C-44, Last Paragraph, Line # 2 (Also found on other pages) of **Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning documents Within the Range of the Northern Spotted Owl Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl.**

*"Provide for retention of old-growth fragments in watersheds where little remains."*

*"Landscape areas where little late-successional forest persists should be managed to retain late-successional patches. This standard will be applied to fifth field watersheds (20-200 square miles) in which federal forest lands are currently comprised of 15 percent or less late-successional forest."*

- Pages 51-52, KFRA RMP, Off-Highway Vehicles

**Add:**

- To allow off-highway vehicles to use BLM/Klamath Falls Resource Area roads when weather conditions are such that damage to roads will not occur, or to use roads that will not impact threatened, endangered, or sensitive plant, animal, or fish species.
- To prevent off-highway vehicles from using BLM/Klamath Falls Resource Area roads by extending the seasonal closure when weather conditions are such that damage to roads will occur, or to prevent use of roads that will impact threatened, endangered or sensitive plant, animal, or fish species.

Before either scenario is implemented, the proposal must be reviewed by the Klamath Falls Resource Area Interdisciplinary Team (ID Team). The ID Team will make a recommendation to the Klamath Falls Field Manager to open the road or to extend the closure. The Field Manager will consider the ID Team's recommendation and make a decision on that recommendation.

A decision to extend the closure must be accompanied by publishing a Notice of Emergency Closure in the Federal Register according to the regulations found at 43 CFR 8364.1.

**Rational for Change:** The Plan Maintenance provides a mechanism to close a road prior to November 1<sup>st</sup> or to extend the closure past April 15<sup>th</sup>, if conditions warrant it. The same mechanism would be used to delay closing a road past the November 1<sup>st</sup> date or to open a road prior to April 15, if conditions warrant it.



## Plan Maintenance for fiscal year 2001

### Amendment to the Northwest Forest Plan

The Survey and Manage mitigation in the Northwest Forest Plan was amended in January 2001 through the signing of the Record of Decision (ROD) for the “Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines.” The intent of the amendment was to incorporate up-to-date science into management of Survey and Manage species and to utilize the agencies’ limited resources more efficiently. The ROD provides approximately the same level of protection intended in the Northwest Forest Plan but eliminates inconsistent and redundant direction and establishes a process for adding or removing species when new information becomes available.

The ROD reduced the number of species requiring the Survey and Manage mitigation, dropping 72 species in all or part of their range. The remaining species were then placed into six different management categories, based on their relative rarity, whether surveys can be easily conducted, and whether there is uncertainty as to their need to be included in this mitigation. The following table shows a break down of the placement of these 346 species, and a brief description of management actions required for each.

The ROD identifies species management direction for each of the above categories. Uncommon species categories C and D require the management of “high priority” sites only, while category F requires no known site management. The new Standards and Guidelines also establish an in-depth process for reviewing and evaluating the placement of species into the different management categories. This process allows for adding, removing, or moving species around into various categories, based on the new information acquired through our surveys.

Approval of the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines* amended the Standards and Guidelines contained in the Northwest Forest Plan Record of Decision related to Survey and Manage, Protection Buffers, Protect Sites from Grazing, Manage Recreation Areas to Minimize Disturbance to Species, and Provide Additional Protection for Caves, Mines, and Abandoned Wooden Bridges and Building That are Used as Roost Sites for Bats. These standards and guidelines were removed and replaced by the contents of the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines*.

Plan Maintenance actions to delete all references to Management Action/Direction for Survey and Manage and Protection Buffer species in the Klamath Resource Area Resource Management Plan and Appendices and adopt the Standards and Guidelines contained in the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures* are required in response to the Record of Decision.

Copies of the ROD and Final SEIS may be obtained by writing the Regional Ecosystem Office at PO Box 3623, Portland, Oregon 97208, or they can be accessed at <http://www.or.blm.gov/nwfp/nepa>.

## Plan Maintenance for fiscal year 2002

### Change of RMP Evaluation Interval to Five Years

The RMP, in the Use of the Completed Plan section, established a three year interval for conducting plan evaluations. The purpose of a plan evaluation is to determine if there is significant new information and or changed circumstance to warrant amendment or

revision of the plan. The ecosystem approach of the RMP is based on long term management actions to achieve multiple resource objectives including; habitat development, species protection, and commodity outputs. The relatively short three year cycle has been found to be inappropriate for determining if long term goals and objectives will be met. A five year interval is more appropriate given the resource management actions and decisions identified in the RMP. The Annual Program Summaries and Monitoring Reports continue to provide the cumulative RMP accomplishments. Changes to the RMP continue through appropriate amendments and plan maintenance actions. A five year interval for conducting evaluations is consistent with the BLM planning regulations as revised in November 2000.

The State Director decision to change the evaluation interval from three years to five years was made on March 8, 2002. The next evaluation of the Klamath Falls Resource Area RMP will address implementation through September 2003.

### **Survey and Manage Annual Species Review**

The 2001 Record of Decision added a process called the Annual Species Review to change in category and add or drop species from the Survey and Manage list. This process allows for adaptive management of species based on new information. In March of 2003 the Annual Species Review was released reducing the number of species requiring Survey and Manage mitigation from 317 to 304. Reference Table 1-1 of the 2002 ASR for a complete listing. Table 35.1 shows a break down of the placement of these species and a brief description of management actions required for each.

**Table 35.1 - Redefined Survey and Manage Categories**

<b><u>Relative Rarity</u></b>	<b><u>Pre-Disturbance Surveys Practical</u></b>	<b><u>Pre-Disturbance Surveys Not Practical</u></b>	<b><u>Status Undetermined Pre-disturbance Surveys Not Practical</u></b>
<b>Rare</b>	Category A - 53 species • Manage All Known Sites • Pre-Disturbance Surveys • Strategic Surveys	Category B - 182 species • Manage All Known Sites • N/A • Strategic Surveys	Category E - 17 species • Manage All Known Sites • N/A • Strategic Surveys
<b>Uncommon</b>	Category C - 3 species • Manage High-Priority Sites • Pre-Disturbance Surveys • Strategic Surveys	Category D - 12 species <sup>1</sup> • Manage High-Priority Sites • N/A • Strategic Surveys	Category F - 8 species • N/A • N/A • Strategic Surveys

<sup>1</sup> Includes three species for which pre-disturbance surveys are not necessary

## **36.0 Plan Amendments**

- An amendment to the RMP on Unintentional Encroachments and Survey Hiatuses was completed in FY 99. The plan amendment allowed a 1.62-acre tract of land to be moved from Land Tenure Zone 1 to Land Tenure Zone 3, which allows for sale. The amendment added the provision to the RMP Land Tenure Adjustment - Management Actions/Direction for All Land Use Allocations section:
  - *"Where survey hiatuses and unintentional encroachments on public lands are discovered in the future that meet disposal criteria, the lands may be automatically assigned to Zone 3 for disposal."*





# **KLAMATH FALLS RESOURCE AREA**

## **MONITORING REPORT**

**Fiscal Year 2003**





# **KLAMATH FALLS RESOURCE AREA RESOURCE MANAGEMENT PLAN MONITORING REPORT**

## **Introduction**

This document represents the seventh monitoring-year report of the Klamath Falls Resource Area Resource Management Plan since the Record of Decision was signed in June 1995. This monitoring report compiles the results and findings of implementation monitoring for fiscal years 1996-2003. This report does not include all the monitoring conducted by the Klamath Falls Resource Area that is identified in activity or project plans. Monitoring at multiple levels and scales, along with coordination with other BLM and Forest Service units, has been initiated through the Regional Interagency Executive Committee (RIEC). Refer to Appendix K of the RMP for a full list of monitoring questions.

## **Fiscal Year 1996-2003 Monitoring Summary**

The Resource Management Plan monitoring effort for Fiscal Years 1996-2003 addressed the 88 implementation questions relating to the 21 land use allocations and resource programs contained in the Monitoring Plan. There are 54 effectiveness and validation questions included in the Monitoring Plan. The effectiveness and validation questions were not addressed because some time is required to elapse after management actions are implemented in order to evaluate results that would provide answers.

### **Findings**

Monitoring results found full compliance with management action/direction in the 21 land use allocations and resource programs identified for monitoring as well as the 88 implementation monitoring questions contained in the plan.

The issue of soil health on the resource area is being investigated by quantifying disturbance levels. Concerns have been raised on the resource area about excessive soil compaction possibly occurring with repeated use of a mechanical harvester, mechanical slashbuster, or combination of both in a forest stand or juniper woodland over time. Use of a mechanical harvester/slashbuster results in greater areal ground disturbance since it is not confined to skid roads, although in theory a mechanical harvester reportedly causes less soil compaction since it exerts less pounds per square inch of force/pressure than other ground-based harvesting machinery. Since use of a mechanical harvester/slashbuster is becoming more and more common and is the most economical choice for density-management treatment of forest stands and juniper woodlands, the resource area is measuring the areal extent of soil disturbance and changes in soil bulk density in representative ground disturbing projects to evaluate soil health.

Findings from monitoring done in 1998 in one timber sale area suggest that detrimental soil compaction, as defined by both regional and resource management plan standards and guidelines, may have occurred. Findings from monitoring done in a different timber sale area in 1998, 1999 and completed in 2000 suggest that the threshold for detrimental compaction (15 percent increase in bulk density) was approached but not exceeded. However, multiple years of monitoring mechanical harvester/slashbuster use are needed before drawing any



conclusions about soil compaction. Consequently, the resource area will continue monitoring representative projects using quantitative methods in order to accumulate more data from which conclusions about the areal extent and degree of soil compaction resulting from the use of a mechanical harvester can be made. New pretreatment studies were initiated in FY 2001 in four treatment areas: 1 timber sale, 1 slashbuster unit, and 2 juniper treatments. Copies of the soil monitoring reports, detailing methods and results, can be obtained at the resource area office. In FY 2003, monitoring on the Bly Mountain Timber Sale area was completed and pre-treatment studies were initiated on the Saddled Again Timber Sale area to quantify the compaction from snow and cable logging.

### **Recommendations**

No implementation or management adjustments are recommended, as Fiscal Year 1996-2003 monitoring results indicate very high compliance with management action/direction.

### **Conclusions**

Analysis of the Fiscal Years 1996-2003 monitoring results concludes that the Klamath Falls Resource Area has almost 100% compliance with management action/direction, and therefore no major changes in management direction or resource Management Plan implementation is warranted at this time. The results indicate a continuing conscientious implementation of the plan by informed and knowledgeable staff and managers.

## **Fiscal Year 2003 Monitoring**

### **Introduction**

The information following represents the sixth monitoring report of the Klamath Falls Resource Area Resource Management Plan for which the Record of Decision was signed in June 1995. This monitoring report compiles the results and findings of implementation monitoring of the seventh full fiscal year of implementation of the RMP, fiscal year 2003. Tables M-1 and M-2 provide a summary of the projects monitored and the selection categories respectively.

This report does not include the monitoring conducted by the Klamath Falls Resource Area that is identified in activity or project plans. Monitoring at multiple levels and scales along with coordination with other BLM and Forest Service units has been initiated through the Regional Interagency Executive Committee (RIEC).

### **Discussion of Discrepancies**

#### **Timber Harvest Acres - Discrepancies from the RMP:**

Table M-3 compares projected volume and acres to actual volume and acres harvested to date. On the Westside, 55.4 MMBF (105 percent of assumed annual average) has been harvested on approximately 16,436 acres. On the Eastside, 4.1 MMBF (114 percent of the assumed annual average) has been harvested on approximately 2,718 acres. While the total volumes harvested are in line with the RMP, the number of acres yielding that volume was higher than predicted. A combination of factors has contributed to this discrepancy. Regeneration harvests were expected to result in higher yields per acre than other treatments. Only 193 acres of regeneration harvests have been implemented in the first nine years on the Westside and none on the Eastside. Under the RMP, approximately 131 acres were planned per year (1,179 acres in nine years) on the Westside and 33 acres on the Eastside. In lieu of regeneration harvests, approximately 25 percent of the volume to date has come from mortality salvage sales. Typically, mortality salvage harvests consist of removing less volume per acre but treating more acres than regeneration harvests.

In FY 2003, 11.5 million board feet (MMBF) was sold. This represents approximately 181% of the 6.3 MMBF allowable sale quantity. Cumulative information on timber harvest acres, volumes, and harvest types since the beginning of the RMP are provided in Table M-4.

Except for the District declared Allowable Sale Quantity, projections made in the RMP are not intended as management action/direction, but rather are underlying RMP assumptions. Projected levels of activities are the approximate level expected to support the Allowable Sale Quantity.

Unresolved litigation, and uncompleted strategic surveys under Survey and Manage limited the ability to offer timber sales at the levels anticipated by the RMPs during Fiscal Year 2001 and in some prior years. The KFRA has been able to make up the shortfall in volume sold in previous years. It is not possible at this time to accurately predict the duration or effect of uncertainties on the long term ability to implement the underlying assumptions that form the basis of the Allowable Sale Quantity. Changes to the RMP based on the inability to implement timber resources decisions and assumptions in the future would be premature at this time. These circumstances will be more closely examined during the next RMP evaluation.

### **Wildlife Discrepancies:**

As part of the RMP, it was planned to treat 1/4 of the brushfields in each allotment during a decade. Treatment, in this case, meant returning the brushfield to an early seral state or rejuvenating it through extensive use of mechanical, manual or fire treatments. The acre figures noted in the Grazing EIS were based on 1/4 of the acres of identified mature brushfield in each allotment. Since the RMP was approved, the range inventories have shown the need for more treatment acres to simply maintain existing sagebrush stands in optimum condition. The treatments did not result in as extensive ground disturbance as originally proposed, but may cover more acres per allotment.

The prescribed fire EA (Environmental Assessment OR-014 94-09) was incorporated into the RMP and proposed treating up to 10,000 acres. Currently, the projects proposed to treat excess fuels under the Fire EA, treat some of the same allotments where brushfields are scheduled to be managed. Fuels management treatments were also analyzed in the RMP.

Therefore, there may be more acres treated in each allotment than is covered in Appendix H of the RMP. However, since the types of treatments have been analyzed in the RMP and the disturbance per acre is less than previously predicted, the impacts are well within those analyzed in the RMP.

The number of acres treated in large blocks for density management purposes may have a negative effect upon deer and elk and other species dependent upon the understory components of a stand for cover. In order to provide some variation in the stand density across the landscape, small clumps of trees were retained within the sale areas. The number and acreage of clumps retained was dependent upon the importance of an area to deer and elk and upon the original characteristics of the stand. The combination of these clumps and reserve areas such as Riparian Reserves comprise up to 20 percent of the harvested acres for a given entry. Some of these "wildlife clumps" are comprised primarily of white fir and are overstocked. These "wildlife" clumps may be treated during subsequent harvest entries and are not considered to be permanent reserves. For the sales within the third year evaluation time frame, all wildlife clumps were less than an acre. For the period beyond this evaluation period, larger clumps of up to 15 acres may be retained. The decision not to thin these areas may result in an increase in the number of snags and thus result in a potential benefit to woodpeckers and secondary cavity nesters. No evaluation of the use of these wildlife clumps by wildlife has been made to date.



**Table M.1 - Projects Monitored FY 2003**

<b><u>Project Type</u></b>	<b><u>Number and/or Names of Projects Monitored</u></b>
<b>Timber Sales</b>	Clover Hookup Timber Sale (TS), CHEW TS, Bly Mountain TS, West Spencer TS, Bull Springs Salvage
<b>Silviculture Treatments</b>	Bear Valley Wildlife Refuge: Using silvicultural techniques to improve nesting and roosting habitat for bald eagles; Forest Development Projects: restoration thinning, precommercial thinning, pruning, site preparation, tree planting, reforestation surveys, maintenance/protection of stands, Hamaker Slashbuster bitterbrush planting.
<b>Fish Habitat Improvement</b>	Gerber Reservoir Suckers, Dry Prairie, Horsefly, and Pitchlog Grazing Allotments for suckers.
<b>Riparian Habitat Improve.</b>	Temperature monitoring in Spencer Creek-riparian thin; Post-treatment soil bulk density monitoring in Bly Mountain timber sale riparian reserves; Pre-treatment monitoring of Johnson/Sheepy riparian thins; Pre-treatment monitoring of Gerber riparian conifer treatments
<b>Wetland Improvement</b>	Wood River Wetland.
<b>Wildlife Habitat Improvement</b>	Wood River Wetland: Vegetation, yellow rails, spotted frogs, sandhill cranes, bald eagles, waterfowl brood counts, and neotropical birds; Muddy Tom Timber Sale: Great gray owl meadow buffers and Northern spotted owls; Hayden Creek: Northern spotted owl territory; Gerber Reservoir: Bald eagle, Western sage grouse historic leks, peregrine falcon potential nest areas, herptile surveys, osprey nest monitoring, landbird monitoring, Northern spotted owl historic nesting sites, bald eagle aerial and ground surveys and mid-winter counts, Canada Lynx and Forest carnivore monitoring, Great gray owl monitoring prior to ground-disturbing activities; known Northern Goshawk Cooper's hawk and sharp-shinned hawk site monitoring; Elk and deer population monitoring flights; Bear Valley Wildlife Refuge: BLM & USFWS cooperating to improve bald eagle roosting and nesting habitat; Peregrine falcon habitat monitoring for the Lakeview District; Fourteen bald eagle nest territories and three roost areas monitored in cooperation with others; Golden eagle historic nest monitoring; Townsend's Big-eared bat monitoring on the Klamath River.
<b>Prescribed Burns</b>	Brady Butte, Stukel Mountain and Baldy Crest
<b>Grazing Projects</b>	20 existing improvements (fences, spring improvements) and 52 grazing allotments (studies and use supervision)
<b>Water &amp; Soil Projects</b>	Photo points of Lower Spencer Creek road treatments and culvert removals; photo points of Saddle Draw fill material removal; monitoring of spring discharge in the Gerber Block; and soil compaction monitoring on Bly Mountain and Saddled Again timber sales.
<b>Juniper Projects</b>	Lorella, Bumpheads, Kilgore, Schnipps, Caseview, Short Lake Mountain, and Antelope Creek.

**Table M-2 - FY 2003 Implementation Monitoring Selection Categories**

<u>Selection Categories</u>	<u># of Projects</u>	<u># Monitored</u>	<u>% Monitored</u>
Ground-Disturbing Activities (other than timber sales)	18	16	89%
Grazing Allotments	95*	52**	55%***
Projects in Riparian Reserves	7	3	43%
Removing Structures within Riparian Reserves	2	2	100%
Projects in Late Successional Reserves	0	0	0
Timber Sales in Watersheds With <15% Late Success. Forest	0	0	0
Timber Sales (Harvesting completed)	3	1	33%
Juniper Projects	16	7	44%
Projects Within or Adjacent to Special Areas	2	2	100%
Projects That Include or are Adjacent to Special Habitats	3	3	100%
Projects in VRM II or III Areas	4	4	100%
Projects Within or Adjacent to Wild & Scenic River Corridors	2	2	100%
Projects in Rural Interface (prescribed fire)	2	2	100%
Noxious Weed Project (sites)	256	56	22%
Prescribed Burn Projects	8	2	25%
Projects That Required Dust Abatement	0	0	0

Note: Minimum monitoring requirement in each listed category is 20%. The district exceeded the minimums in numerous categories, primarily due to overlapping applicability (many projects meet several criteria in above table).

\*The KFRA has 95 allotments with grazing currently authorized under the RMP. Of these, 20 were in non-use in FY 2002.

\*\* Includes one or more of the following monitoring studies or activities: utilization, use supervision, condition, trend, actual use, photo points, range/riparian studies.

\*\*\*The 52 allotments are 55% of the KFRA's total allotments, but over 85% of the KFRA grazing land base.

**Table M-3 - Comparison of Projected vs. Actual Harvest Volumes (MMBF) and Acres to Date**

<u>Harvest Method</u>	<u>WESTSIDE</u>				<u>EASTSIDE</u>			
	<u>Volume(MMBF)*</u>		<u>Acres</u>		<u>Volume(MMBF)</u>		<u>Acres</u>	
	<u>Projected</u>	<u>Actual</u>	<u>Projected</u>	<u>Actual</u>	<u>Projected</u>	<u>Actual</u>	<u>Projected</u>	<u>Actual</u>
Density Management	53.19**	41.5**	7,452	9,754	3.6**	2.6**	2,421	1,457
Regeneration Harvests	53.19**	41.5**	1,179	193	3.6**	2.6**	297	0
Mortality Salvage	0.0	13.9	0	6,489	0.0	1.5	0	1,124
<b>Totals</b>	<b>53.19</b>	<b>55.4</b>	<b>8,631</b>	<b>16,436</b>	<b>3.6</b>	<b>4.1</b>	<b>2,718</b>	<b>2,581</b>

\*MMBF = Million Board Feet

\*\*Combined figures for Density Management and Regeneration Harvest volumes.



**Table M-4 - Timber Sale Volume and Acres Offered (Entire Resource Area)****Total Timber Volume – MBF (Thousand Board Feet)**

	<u>Westside</u>		<u>Eastside</u>		<u>Combined</u>		<u>Annual</u>	<u>Assumed</u>	<u>Percent</u>
	<u>FY03</u>	<u>FY95-03</u>	<u>FY03</u>	<u>FY95-03</u>	<u>FY03</u>	<u>FY95-03</u>	<u>Average</u>	<u>Ann. Ave.</u>	<u>Assumed Ave.</u>
Timber Sale Program	10724	55715	836	4536	11559	60251			
Matrix Timber Sales	10724	55350	692	4072	11416	59423	6603	6310	105%
All Reserves	0	365	144	464	144	828			
Key Watersheds	10712	36793	0	0	10712	36793			
Regeneration Harvests	4527	4810	0	0	4527	4810			
Density Management	4927	36641	670	2535	5597	39177			
Mortality Salvage	1131	13686	0	1488	1131	15173			
Small Sales-Regulated	0	70	22	50	22	120			
R/W Clearing	139	143	0	0	139	143			
Unmapped LSRs	0	22	0	0	0	22			
Riparian Reserves	0	259	-2	51	-2	310			
Admin Withdrawal	0	84	146	413	146	497			

**Total Timber Sale Acres**

	<u>Westside</u>		<u>Eastside</u>		<u>Combined</u>		<u>Annual</u>	<u>Assumed</u>	<u>Percent</u>
	<u>FY03</u>	<u>FY95-03</u>	<u>FY03</u>	<u>FY95-03</u>	<u>FY03</u>	<u>FY95-03</u>	<u>Average</u>	<u>Ann. Ave.</u>	<u>Assumed Ave.</u>
Timber Sale Program	796	16584	879	246	1675	19830			
Matrix Timber Sales	796	16436	344	2581	1140	19017	2113	1228	172%
Reserves	0	148	535	665	535	813			
Key Watersheds	796	9448	0	0	796	9448			
Regeneration Harvests	129	193	0	0	129	193	21	131	16%
Density Management	275	9754	324	1457	599	11211	1246	1097	114%
Mortality Salvage	390	6485	0	1104	390	7589			
Small Sales-Regulated	0	0	20	20	20	20			
R/W Clearing	2	4	0	0	2	4			
Unmapped LSRs	0	2	0	0	0	2			
Riparian Reserves	0	96	-1	39	-1	135			
Admin Withdrawal	0	50	536	626	536	676			

**All Land Use Allocations****Expected Future Conditions and Outputs**

- Protection of SEIS special attention species so as not to elevate their status to any higher level of concern.

**Implementation Monitoring**

**Monitoring Question 1:** Are surveys for the species listed in Appendix E (RMP/EIS) and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) conducted before ground-disturbing activities occur?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** Upper Johnson Creek and Sheepy Creek Riparian Thins, Baldy Crest Prescribed Burn, Chase-Hamaker-East Ward Timber Sale, Spencer Creek culvert replacement proposal

**Findings (for all activities):**

**Animals**

*Great Gray Owl*

During the 2002 field season, great gray owl surveys were conducted to protocol within suitable habitat of the Surveyor, Saddled Again and Buck Again timber sale areas.

*Mollusks*

Terrestrial

One Survey and Manage terrestrial mollusk was found in FY 2003. Under the existing standards and guides released in Spring 2002, three Survey and Manage (S&M) terrestrial mollusk *Pristiloma arcticum crateris* (Crater Lake tightcoil), *Derocerus hesparium* (Evening field slug), and *Monadenia chaceana* (Oregon Shoulderband) had potential to occur within the resource area. Survey protocols for these species only require surveys in high priority habitat. Pre-disturbance surveys according to protocols of potential habitat for terrestrial mollusks were conducted in the spring of 2003 in the Johnson Creek riparian thin, Sheepy Creek riparian thin, and the area of the proposed Spencer Creek culvert replacement.

The majority of Survey and Manage mollusk site locations were captured with a Global Positioning System (GPS), and entered into the regional corporate database for S&M, referred to as ISMS (Interagency Species Management System).

Aquatic

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. Aquatic mollusks were found in Upper Johnson Creek. They are *Fluminicola* sp. and were sent to experts for identification to species. No sites of *Fluminicola* were found in any of the other pre-disturbance project areas.

**Plants**

*Fungi*

Pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species. Incidental finds of Survey and Manage fungi were recorded and sent in for verification in FY 2003. Purposive surveys for fungi species continued in the spring of 2003. Survey and Manage site locations were flagged and captured with GPS and entered into ISMS.

*Bryophytes*

Klamath Falls Resource Area has no potential habitat for any S&M bryophyte species, which require pre-disturbance surveys, therefore no bryophyte surveys were conducted.

*Lichens*

Klamath Falls Resource Area has no potential habitat for any S&M lichen species, which require pre-disturbance surveys, therefore no lichen surveys were conducted.

**Conclusions:** Required surveys for the species listed in Appendix E and/or Table 1-1 of the Standard and Guidelines (S&M SEIS) are being implemented.

**Monitoring Question 2:** Are protection buffers being provided for specific rare and locally endemic species and other species in the upland forest matrix?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are



provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** Upper Johnson Creek Riparian Thin, Chase-Hamaker-East Ward, and Buck Again Timber Sales

**Findings:**

**Animals**

*Great Gray Owl*

There were no great gray owls detected during 2002 surveys in the Surveyor, Saddled Again and Buck Again timber sale areas.

*Mollusks*

Terrestrial

There is one known site of a Survey and Manage terrestrial mollusk on the resource area, but not on matrix land. *Deroceras hesparium* was found in the Hornbill DDR and is managed as a known site.

Aquatic

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. Aquatic mollusks were found in Upper Johnson Creek. They are *Fluminicola* sp. and were sent to experts for identification to species. No sites of *Fluminicola* were found in any of the other pre-disturbance project areas. These sites will be managed as Known Sites and will be buffered with 160 foot buffers. The sites will be revisited following project completion.

We revisited East Miner's Creek Culvert project, a Known Site for *Fluminicola* sp. The culvert replacement project was completed. We found *Fluminicola* sp. populations in the same locations as the pre-disturbance survey. This indicates that the management actions taken provided protection for this site.

**Plants**

*Fungi*

Based on management recommendations in Appendix J2 in the Northwest Forest Plan Final SEIS, and appropriate literature, buffer for each of these species were determined. These sites will be managed as known sites and will be revisited following project completion.

*Vascular Plants*

Only one Survey and Manage species of vascular plant (*Cypripedium montanum*) has been found on the resource area. Known sites continue to be managed according to Management Recommendations. Sites were monitored in FY 2003 and all sites had the same number of individual plants present as were documented previously.

**Conclusions:** The required management actions for specific rare, and locally endemic, species, and other species in the upland forest matrix, are being implemented.

**Monitoring Question 3:** Are the known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) being protected?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are

provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** *Cypripedium montanum* sites in Clover Hookup TS were revisited in Spring 2003. These areas were buffered when the surrounding matrix land was logged in 2002. The buffered sites and plants were intact.

**Findings:** See answer to Monitoring Question 2 above.

**Conclusions:** Known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E of the RMP and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) are being surveyed and protected.

**Monitoring Question 4:** Are the known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E of the RMP being surveyed?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** Upper Johnson Creek Riparian Thin, Chase-Hamaker Area.

**Findings** See answer to Monitoring Question 1 above.

**Conclusions:** Known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E of the RMP are being surveyed and protected.

**Monitoring Question 5:** Are high priority sites for species management being identified?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** Upper Johnson Creek Riparian Thin, Chase-Hamaker-East Ward and Buck Again Timber Sales, and Baldy Crest Prescribed Burn Area.

**Findings:**

**Animals**

*Great Gray Owl*

See answer to Monitoring Question 1 above.

*Mollusks*

Aquatic - There are no high priority aquatic mollusks sites on the resource area.

Terrestrial - There are no high priority terrestrial mollusk sites on the resource area.

**Plants**

*Fungi*

One high priority Survey and Manage fungi species (*Clavariadelphus truncates*) was found on the Klamath Falls Resource area in the Frosty Timber Sale. It is inside the riparian reserve and is being managed as a known site.



#### *Vascular Plants*

One vascular plant species (*Cypripedium montanum*) is documented on the resource area. All areas are being managed as known sites according to NWP Management Recommendations. These sites were revisited in FY 2003. the individual plants are still present.

**Conclusions:** High priority sites for species management are being identified. High priority species are managed the same as manage all known sites species.

## Late-Successional Reserves

### Expected Future Conditions and Outputs

- Development and maintenance of a functional, interacting, Late-Successional, and old-growth forest ecosystem in Late-Successional Reserves
- Protection and enhancement of habitat for Late-Successional and old-growth forest-related species including the northern spotted owl

### Implementation Monitoring

**Monitoring Question 1:** What is the status of the preparation of assessments and fire plans for Late-Successional Reserves?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #1.

**Monitoring Performed:**

The status of the development of the resource area wide LSR assessment was reviewed.

**Findings:** A single Late-Successional Reserve Assessment was prepared in FY 2003 that assesses all 19 of the reserves designated for late-successional forest values within the resource area. Data on current conditions within each of the reserves had been collected in previous fiscal years. Along with historical descriptions and harvest data, these data served as a basis for written assessments of conditions in each reserve. Management recommendations were finalized during FY 02. The Late-Successional Reserve Assessment was submitted to the Regional Ecosystem Office (REO) for review and approval in the spring of 2003.

**Conclusion:** RMP requirements will be met in FY 2004.

**Monitoring Question 2:**

A) What activities were conducted or authorized within Late-Successional Reserves (LSRs) and how were they compatible with the objectives of the LSR plan?

B) Were the activities consistent with SEIS ROD Standards and Guides, RMP management direction, and Regional Ecosystem Office review requirements and the LSR assessment?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #2.

**Monitoring Performed:** Review of activities conducted or authorized within Late-Successional Reserves (LSRs).

**Findings:** No activities occurred within LSRs, since the late-successional reserve assessment has not yet been approved.

**Conclusion:**

No activities occurred, since the late-successional reserve assessment has not yet been approved. Contract crews started purposive surveys in FY 2002 and continued them in FY 2003.

**Monitoring Question 3:** What is the status of development and implementation of plans to eliminate or control non-native species, which adversely impacts LSRs?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #3.

**Monitoring Performed:** Review of species lists from each unmapped LSR, and review of the noxious weed management program.

**Findings:** Noxious weed management is not a habitat manipulation activity that requires a Late-Successional Reserve Assessment before implementation. Standards and Guides for LSRs direct us to evaluate the impacts of nonnative species currently within reserves, and to develop plans for control or elimination of species that are inconsistent with LSR objectives.

Vascular plant inventories revealed only four nonnative plant species that frequently occur in the LSRs. Bull thistle (*Cirsium vulgare*), mullein (*Verbascum thapsus*), western salsify (*Tragopogon dubius*), and cheat grass or downy brome (*Bromus tectorum*) were found in physically disturbed areas within LSRs. These species are not targeted for control by the resource area noxious weed management program because they are abundant and widespread in disturbed sites, and decline in abundance without disturbance. Therefore, these species are not inconsistent with LSR objectives. None of the noxious weed species that are targeted for control were found within LSRs.

**Conclusion:** Impacts of nonnative species have been evaluated, and the species that currently exist within the reserves, are not inconsistent with LSR objectives. Noxious weed management activities and prevention strategies on lands near and adjacent to late-successional reserves will reduce the probability that other nonnative species will become established within the reserves.

**Monitoring Question 4:**

- A) Are the effects of existing and proposed livestock management and handling facilities in Late-Successional Reserves being evaluated to determine if LSR objectives are met?
- B) Are livestock management and/or handling facilities relocated where LSR objectives are not met?

**Monitoring Requirement:** The Annual Program Summary will report the status of evaluations of existing and proposed livestock management facilities inside LSRs, to determine if reserve objectives are being met. The APS will report on the status of relocating those facilities where LSR objectives cannot be met.

**Monitoring Performed:** Review of existing and proposed livestock management facilities within the resource area.

**Findings:** No existing or proposed livestock management facilities are located within LSRs in the resource area.

## Matrix

### Expected Future Conditions and Outputs

- Production of a stable supply of timber and other forest Commodities.
- Maintenance of important ecological functions such as dispersal of organisms, carryover



- of some species from one stand to the next, and maintenance of ecologically valuable structural components such as downed logs, snags, and large trees.
- Assurance that forests in the Matrix provide for connectivity between mapped Late-Successional Reserves.
- Provision of habitat for a variety of organisms associated with early and Late-Successional forests.

## Implementation Monitoring

**Monitoring Question 1:** Are suitable numbers of snags, coarse woody debris, and green trees being left, following timber harvest, as called for in the SEIS ROD Standards & Guidelines and RMP management direction?

**Monitoring Requirements:** At least 20 percent of timber sales in the resource area will be examined by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters, and distribution within harvest units. Snags and green trees left following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

The same timber sales will be inventoried pre- and post-harvest to determine if SEIS Record of Decision and RMP down log retention direction and protection buffers for special status and SEIS special attention species have been followed.

**Monitoring Performed:** In FY 2003, post treatment monitoring was started on one timber sale (Muddy Tom) and completed on two other sales; Bull Spring Fire Salvage and Clover Hookup Timber Sale. Monitoring will continue on Muddy Tom when cutting and yarding operations are completed. Table M-5 displays all the timber sales that have been monitored from FY 1997 through FY 2003.

**Findings:** Results of prior year timber sale monitoring are shown in earlier Annual Program Summaries. Table M-6 summarizes the stand attribute data that was gathered from post-treatment stand exams on the Bly Mountain Timber Sale. This Sale was located on the Eastside of the Resource Area.

**Table M-5 - Timber Sale Monitoring Summary**

<u>FY</u>	<u>Timber Sale Name</u>	<u>Acres</u>	<u>Monitored By</u>	<u>Pre/Post Treatment Stand Exams Completed</u>	<u>Soil Monitoring Completed</u>
1997	Too Frosty	459	KFRA ID Team	Yes	Post Treatment Only
1998	Lower Spencer Salvage	1000+	REO & KFRA ID Team	No	No
1999	Kakapoo Stew	397	REO & KFRA ID Team	Yes	Pre & Post Treatment
2000	Stukel Mountain	230	KFRA ID Team	Yes	No
2001	Grenada East	1440	Silviculture/Wildlife/Timber	Yes	Post Treatment Only
2001	Grenada West	1003	Silviculture	Pre-treatment only	No
2001	Slim Chicken	2113	Silviculture	Pre-treatment only	No
2001	Muddy Tom	400	Soils	Yes	Pre Treatment
2002	Muddy Tom	1880	Timber and Silviculture	Yes (some)	GPS Skid Trails
2002	Bull Sp. Fire Salv. Modif.	84	KFRA ID Team	Yes	No
2002	Clover Hookup	940	Silviculture and Timber	Yes	Snow Logging Photo Pts
2003	Bly Mountain	631	Silviculture	Yes	Pre & Post Treatment

## **Table M-6 - Summary of Post Treatment Stand Characteristics for Bly Mountain Timber Sale Monitored in FY 2003**

Structure	Multi-Strata
Canopy Closure	Average = 52% Range 0 – 100%
Basal Area / Acre (Sq ft/ac)	Average = 75 Range 20 - 170
Number of Trees/Acre	Average = 122.6 Range = 10.4 to 508.5
0-6"DBH	26.7 (Juniper) / 33.1 (PP) Total = 59.8
7"-18" DBH	2.1 (Juniper) / 51 (PP) Total = 53.1
19"-30" DBH	0.2 (Juniper) / 9.5 (PP) Total = 9.7
>30" DBH	0.2 (PP) Total = 0.2
Tree Species Composition	23.6% (Juniper) / 76.4% (PP)
Fuel Loading Tons/Acre (Only logs > 5" diameter and 8' long)	2.7 Tons/Acre Range 0 – 11.4 tons/acre

### Coarse Woody Debris (Total Length/Acre)

≥12" diameter, ≥ 8' long - Decay Class 1 & 2 Logs	68.0 feet (RMP Criteria = 50 linear ft/ac)
≥12" diameter, ≥ 8' long - Decay Class 3, 4, & 5	137 feet
≥12" diameter, ≥ 8' long - All Decay Classes	183 feet
≥ 5" diameter, ≥8' length - All Decay Classes	618 feet Range = 0 – 3,420 feet

### Snags/Acre

<u>DBH</u>	<u>7"-14" DBH</u>	<u>≥15" DBH</u>	<u>Totals</u>
Class 1 & 2 Snags – Height ≥ 51 ft.	0.79	None measured	0.79
Class 1 & 2 Snags - Height ≤ 50 ft.	1.42	None measured	1.42
Class 3, 4, & 5 Snags – Height ≥ 51ft.	None measured	None measured	None measured
Class 3, 4, & 5 Snags – Height ≤ 50 ft.	None measured	None measured	None measured
Total Snags/Acre – Height ≥51 ft	0.79	None measured	0.79
Total Snags/Acre – Height <50 ft	1.42	None measured	1.42 Range = 0 – 17.9

### **Snags**

The KFRA RMP requires leaving approximately 1.9 snags per acre (1.4 eastside) to meet the 60 percent optimum cavity nesting habitat for cavity nesters. An additional 0.7 snags per acre must also be left to meet the protection buffer requirement for white-headed and black-back woodpeckers. Snags for the white-headed woodpecker need to be at least 15 inches DBH and in the soft category. For the black-backed woodpecker, the snags must be at least 17 inches DBH and in the hard category. Silvicultural prescriptions in the KFRA have generally called for leaving a total of 2.6 snags per acre (1.4 eastside) or more with at least one greater than 20 inches DBH. For the Bly Mountain Timber Sale, an average of 1.4 snags were left per acre with a range from 0 up to 18 snags per acre in heavy mortality pockets. Although some large snags were observed, no snags over 15" DBH were located on the stand exam plots. As M-6 indicates, a large number of green trees per acre (60+/acre of trees > 7"DBH) are left which allows for potential snag recruitment, many exceeding 15 inches in diameter.

### **Coarse Woody Debris (CWD)**

Page C-40 of the Northwest Forest Plan Record of Decision (ROD) states, "Until standards are developed as described above, the following guidelines apply in areas of **regeneration harvests...**" and sets the down wood requirement at 120 linear feet of logs per acre greater than or equal to 16 inches in diameter and 16 feet long in **regeneration**



**harvest** areas only. For the Eastside, these standards are 50 linear feet of logs per acre greater than or equal to 12 inches in diameter and 8 feet long in **regeneration harvest** areas only. The guideline for partial harvest, as stated on page 23 of the KFRA RMP and page C-40 of the ROD is, "In areas of partial harvest, the same basic guidelines should be applied, but they should be modified to reflect the timing of stand development cycles where partial harvesting is practiced." The KFRA needs to determine how they plan to monitor down wood through different stand development cycles where partial cutting (density management) is practiced to meet this standard and guideline.

Although it has been clarified that density management sales do not have to meet the 120 linear feet ROD requirement (50 linear feet on the Eastside), Table M-6 indicates that some large CWD is still being retained. On the Bly Mountain Timber Sale, approximately 68 linear feet of Class 1 & 2 logs and 137 linear feet of Class 3, 4, & 5 logs were left that met the minimum requirements ( $\geq 12''$  diameter and 8' long). A total of 618 linear feet of logs  $\geq 5''$  diameter and  $\geq 8'$  long were found. Table M-6 indicates that there is a significant amount of smaller diameter CWD that contributes to fuel loading. The overall fuel loading objective in the area is approximately 8-10 tons per acre. FY 2003 monitoring indicated an average fuel loading of approximately 2.7 tons per acre. Some areas of the Bly Mountain Timber Sale were underburned in the mid-1990's to reduce the existing fuel loads. In addition, other areas of the Bly Mountain Timber Sale were hand piled after harvesting. Both treatments contributed to the lower tonage per acre.

### **Green Tree Retention**

The RMP requires that an average of 16 to 25 Westside (5-10 eastside) large green trees per acre be left. Plan maintenance (see 1999 APS) clarification indicates that this requirement is for regeneration harvests only. To date, the KFRA has only implemented 193 acres of regeneration harvest and none on the Eastside. Most harvest prescriptions have consisted of either density management or mortality salvage prescriptions. In both prescriptions, a majority of the large green trees are retained. For the Bly Mountain Timber Sale, as Table M-6 indicates, on average, 60 trees per acre (7" – 30"+ DBH) were left. With the exception of regeneration harvest areas, the KFRA intends to implement uneven-aged management prescriptions, maintain late-successional structural components, and address forest health issues in the Matrix. That is why the stand exam data reveals a complete array of tree sizes.

### **Tree Species Composition**

The KFRA is tracking species composition changes through pre- and post-treatment stand exams to help determine trends in species composition changes. Many of the mixed conifer stands contain a higher percentage of shade tolerant species (white fir) than historically found (Leiburg, 1899). This is primarily a result of past harvesting practices—where many of the overstory pines and Douglas-fir were removed—and fire suppression, which tends to favor the shade tolerant white fir. An objective in most silvicultural prescriptions is to retain the healthy pines and Douglas-fir. Eastside stands are predominantly ponderosa pine with scattered juniper and some white fir and cedar. The data from the Bly Mountain Timber Sale indicates that the post-treatment stands contain approximately 76% ponderosa pine and 24% western juniper.

### **Canopy Closure**

The KFRA is monitoring canopy closure changes through pre- and posttreatment stand exams. Biologists often use canopy closure to evaluate whether a particular stand meets nesting, roosting, or foraging habitat for different species. To date, using the density management prescription, canopy closure after harvest on westside timber sales has averaged 65 to 86 percent, which is a level that meets the requirements for some late-successional dependent species. On the Bly Mountain Timber Sale, the canopy closure after harvest averaged 56% with a range from 0% in the openings to 100%. Forested areas located on the Eastside of the KFRA are drier and more open.

### **Basal Area**

The KFRA monitors basal area changes for a number of reasons. First, there has been considerable research on optimizing stand densities and growth using basal area to monitor stand stocking levels. The Growth and Yield Model (ORGANON) that was used to help determine the ASQ is highly dependent upon basal area before and after harvest to determine growth rates. The silvicultural prescriptions for all sales contain basal area objectives. Posttreatment monitoring is done to determine if those objectives were met. Second, there has been a significant amount of research, particularly on drier sites, determining basal area levels where stands are susceptible to insect outbreaks. The KFRA uses these threshold levels in the silvicultural prescriptions to assure that silvicultural treatments are adequate to improve resiliency of the stand and reduce insect outbreaks. Generally, the higher elevation stands have a higher basal area threshold than the drier, low elevation stands. The objective for the Bly Mountain Timber Sale was to retain, on the average, between 80 and 100 square feet of basal area per acre. The stand exam indicated an average basal area of 75 square feet per acre was retained with a range from 20 to 170 (Table M-6).

### **Conclusion:**

The FY 2001 annual program summary contained some clarification in the Plan Maintenance addressing the requirement of leaving an average of 16 to 25 large green trees in regeneration harvests only. The KFRA has complied with the snag, coarse woody debris, and green tree requirements to date. A quality control program has been initiated to assure that silvicultural prescriptions modeled are actually being implemented on the ground. This is normally monitored using basal area. Post-harvest monitoring indicates retention of many desirable late-successional characteristics. The wildlife staff is monitoring biological use of posttreatment stands by late-successional dependent species (see Wildlife Section).

**Monitoring Question 2:** Are timber sales being designed to meet ecosystem goals for the Matrix?

**Monitoring Requirements:** At least 20 percent of the files on each year's timber sales within Matrix will be reviewed annually to determine if ecosystem goals were addressed in the silvicultural prescription.

**Monitoring Performed:** Monitoring is completed on at least one timber sale per year. In FY 2002, monitoring was completed on two sales and started on a third sale. Table M-5 displays sales monitored from FY 1997 through 2002.

**Findings:** All timber sales are designed to meet ecosystem goals for the Matrix and address resource concerns raised in both the respective Watershed Analysis and Environmental Assessment. All resources are analyzed for impacts including wildlife, soils, hydrology, plants, social, cultural, as well as others. All timber sales incorporate the applicable Best Management Practices (BMPs) described in Appendix D of the RMP. Posttreatment monitoring of all sales to date indicates that most BMPs have been addressed in the Environmental Analysis and incorporated into the Timber Sale Contract.

**Monitoring Question 3:** Are late-successional stands being retained in fifth-field watersheds in which federal forest lands have 15 percent or less late-successional forest?

**Monitoring Requirements:** All proposed regeneration harvest timber sales in watersheds with less than 15 percent late-successional forest remaining will be reviewed prior to sale to ensure that a watershed analysis has been completed.

**Monitoring Performed:** A 15% analysis has been completed.

**Findings:** For all three Watershed Analyses, an analysis was done to determine the amount of Late-Successional Forest in the watershed on federal lands. For both the Spencer Creek



Watershed and the Topsy/Pokegama/Hamaker Landscape Analysis Area, the percent of Late-Successional Forest in the watershed was above 15%. Further direction has required that the Topsy/Pokegama/Hamaker Landscape Analysis Area be analyzed at the fifth field watershed level, which means four different watersheds within the Topsy/Pokegama/Hamaker Landscape need further evaluation.

One unique feature of the KFRA, as indicated by posttreatment monitoring thus far, is that many of the stands after treatment are still capable of contributing to late-successional habitat within the watershed, due to the residual stand characteristics being left. Silvicultural prescriptions have been implemented that addressed two primary objectives: first, maintenance of late-successional habitat; and second, treating overstocked stands to reduce risks of catastrophic fire and/or insect events. There are some watersheds where the residual late-successional habitat may be close to 15% and still experiencing forest health concerns that could benefit from some light understory treatments.

## Riparian Reserves

### Expected Future Conditions and Outputs

(See also Aquatic Conservation Strategy Objectives)

- Provision of habitat for special status and SEIS special attention species.

#### Implementation Monitoring

**Monitoring Question 1:** Are watershed analyses being completed before on-the-ground actions are initiated in Riparian Reserves?

**Monitoring Requirement:** The files for each year's on-the-ground actions will be checked annually to ensure that watershed analyses were completed prior to project initiation and to ensure the concerns identified in the watershed analysis were addressed in the project's Environmental Assessment (EA).

**Monitoring Performed:** Review of project files and EAs.

**Findings:** Watershed analyses have been completed for most areas in the KFRA that contain substantial riparian areas. Since the completion of the Gerber-Willow Valley Watershed Analysis, planning and implementation of projects recommended for riparian areas has progressed.

**Conclusions:** Watershed analyses were completed for all projects having activities within Riparian Reserves. Recommendations and objectives of the watershed analysis were addressed in the EAs and in contract stipulations.

**Monitoring Question 2:** Is the width and integrity of the Riparian Reserves (RR) being maintained?

**Monitoring Requirement:** At least 20 percent of management activities within the KFRA will be examined prior to project initiation and reexamined following project completion, to determine whether the width and integrity of the Riparian Reserves (RRs) were maintained.

**Monitoring Performed:** Riparian reserves were delineated adjacent to streams and wetlands within two timber sale projects: Buck Again and CHEW. These reserves were delineated by the resource area forestry staff and hydrologist. In addition, the resource area hydrologist conducted site visits to the Devaul juniper treatment and the Kerwin Ranch meadow restoration.

**Findings:** The widths of these reserves comply with management direction in the KFRA RMP. Management activities conducted within riparian reserves in FY 2003 maintained the integrity of these reserves.

**Conclusions:** Riparian reserves were delineated properly.

**Monitoring Question 3:** What silvicultural practices are being applied to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain ACS objectives?

**Monitoring Requirements:** The Annual Program Summary will report what silvicultural practices are being applied in order to attain ACS objectives. See Watershed Restoration Projects and Riparian Habitat Enhancement, for a description of the silvicultural prescriptions applied in FY 2002.

**Monitoring Performed:** The riparian thin project along Spencer Creek continued, and KFRA staff visited the project area to ensure that contract stipulations were being followed.

**Findings:** Implementation of the Spencer Creek thin will result help attain ACS objectives. Planning, layout, and pre-treatment monitoring of additional thinning projects within riparian reserves continued in FY 2003, in preparation of implementation in FY 2004.

**Monitoring Question 4:** Are management activities in riparian reserves consistent with SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives?

**Monitoring Requirement:** At least 20 percent of the activities that are conducted or authorized within Riparian Reserves will be reviewed in order to identify whether the actions were consistent with the SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives. In addition to reporting the results of this monitoring, the Annual Program Summary will also summarize the types of activities that were conducted or authorized within Riparian Reserves.

**Monitoring Performed:** Post-treatment monitoring of soil bulk density was conducted in the riparian reserves of the Bly Mountain timber sale. This monitoring was conducted at the end of the field season; results and analysis will be presented in the FY 2004 APS.

In anticipation of riparian reserve understory thinning to be implemented in FY 2004, pre-treatment monitoring of forest composition, stream shading, and/or water temperature was conducted in Johnson Creek, the East Fork of Johnson Creek, the West Fork of Johnson Creek, and Sheepy Creek. In the Gerber Block, stream shading was measured in juniper treatment units adjacent to five streams.

**Findings:** This information will help in assessing the consistency of management actions with planning direction. It will also provide useful guidance for the design and implementation of future projects within riparian reserves.

**Conclusion:** Monitoring results to date show that the silvicultural activities were consistent with the SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives.

**Comment/Discussion:** See the Aquatic Conservation Strategy section of the Annual Program Summary for a discussion of the activities that were conducted or authorized in riparian reserves.

**Monitoring Question 5:** Are new structures and improvements in riparian reserves constructed to minimize the diversion of natural hydrologic flow paths, reduce the amount of



sediment delivery into the stream, protect fish and wildlife populations, and accommodate the 100-year flood?

**Monitoring Requirement:** All new structures and improvements within a Riparian Reserve will be monitored during and after construction to ensure that it was constructed to: minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations and accommodate the 100-year flood.

**Monitoring Performed:**

No new structures or improvements were constructed in Riparian Reserves in FY 2002.

**Monitoring Question 6:**

A) Are all mining structures, support facilities and roads located outside the Riparian Reserves?

B) Are those located within the Riparian Reserves meeting the objectives of the Aquatic Conservation Strategy?

C) Are all solid and sanitary waste facilities excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with Supplemental Environmental Impact Statement Record of Decision Standards and Guidelines, and resource management plan management direction?

**Monitoring Requirement:** All approved mining Plans of Operations will be reviewed to determine if: A) both a reclamation plan and bond were required, B) structures, support facilities and roads were located outside of Riparian Reserves, or in compliance with management action/direction for Riparian Reserves if located inside the Riparian Reserve, C) and if solid and sanitary waste facilities were excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with RMP management direction.

**Monitoring Performed:** None; there are no mining claims in the Klamath Falls RA.

**Monitoring Question 7:** Are new recreation facilities within the Riparian Reserves designed to meet, and where practicable, contribute to Aquatic Conservation Strategy Objectives? Are mitigation measures initiated where existing recreation facilities are not meeting Aquatic Conservation Strategy Objectives?

**Monitoring Performed:** An evaluation of existing recreation facilities inside Riparian Reserves has not been completed to date.

**Monitoring Question 8:** Are new livestock handling and/or management facilities located outside Riparian Reserves? Are existing livestock handling and/or management facilities within the Riparian Reserves meeting the Aquatic Conservation Strategy Objectives?

**Monitoring Performed:** An evaluation of existing livestock handling and management facilities in Riparian Reserves has not been completed to date.

## **Air Quality**

### **Expected Future Conditions and Outputs**

- Attainment of national Ambient Air Quality Standards, Prevention of Significant Deterioration goals, and Oregon Visibility Protection Plan and Smoke Management Plan goals.
- Maintenance and enhancement of air quality and visibility in a manner consistent with the Clean Air Act and the State Implementation Plan.

## Implementation Monitoring

**Monitoring Question 1:** Were efforts made to minimize the amount of particulate emissions from prescribed burns?

**Monitoring Requirements:** At least twenty percent of prescribed burn projects carried out in FY 2003 will be randomly selected for monitoring to assess what efforts were made to minimize particulate emissions, and whether the environmental analysis that preceded the decision to burn addressed the questions set forth in the SEIS discussion of Emission Monitoring (pages 3&4-100).

**Monitoring Performed:** Since 1998, the Lakeview District has implemented a program of aerial observation of burns located near smoke sensitive areas during marginal weather events. In a number of situations, the smoke plume was videotaped as a record.

**Findings:** Of the 10,446 acres of prescribed burning conducted, 1,311 acres were implemented in the spring to reduce the number of emissions. Higher moisture content in the larger fuels and duff means less fuel available to burn. Spring burns are conducted when the atmosphere is unstable; thereby decreasing the impact of smoke in sensitive areas. Of the remaining 9,135 acres, fall burning occurred on areas of light fuel loading or piled material. As related to harvest units, logging methods required the yarding of tops and limbs attached. Some of this material was chipped and utilized. The material not in locations suitable to chipping were burned early fall to provide for complete and quick consumption. Smoldering is not a problem using this method.

**Conclusion:** Efforts were made to reduce particulate emissions from prescribed burns and still meet hazard reduction objectives by conducting burns with higher fuel loads in the spring.

**Monitoring Question 2:** Are dust abatement measures used during construction activities and on roads during BLM timber harvest operations and other BLM commodity hauling activities?

**Monitoring Requirements:** At least 20 percent of the construction activities and commodity hauling activities carried out in FY 2003 and subject to the current RMP will be monitored to determine if dust abatement measures were implemented where needed.

**Monitoring Performed:** The West Grenada, Bly Mountain, and Muddy Tom timber sales have been monitored since harvest operations started.

**Findings:** All timber sales in the Klamath Falls Resource Area include a road watering specification as part of the contract. Water is required to abate dust during any road construction phase of the contracts. Impacts on air quality from road construction and timber hauling were of short duration, local nature, and had little impact on regional air quality.

**Monitoring Question 3:** Are conformity determinations being prepared prior to activities, which may contribute to a new violation of the national Ambient Air Quality Standards, increase the frequency or severity of an existing violation, or delay the timely attainment of a standard?

**Monitoring Requirements:** The Annual Program Summary will address Implementation Question 3.

**Monitoring Performed:** Beginning in 1998, the Lakeview District has had a program of aerial observation of burns located near smoke sensitive areas during marginal weather events. In a number of situations, the smoke plume was videotaped as a record.



**Findings:** Preplanning of prescribed fire projects, use of current weather data, and onsite observations during prescribed burning have reduced frequency and severity of smoke from prescribed fire violating Air Quality Standards.

## Water and Soils

### Expected Future Conditions and Outputs

- Restoration and maintenance of the ecological health of watersheds. See Aquatic Conservation Strategy Objectives.
- Improvement and/or maintenance of water quality in municipal water systems.
- Improvement and/or maintenance of soil productivity.
- Reduction of existing road mileage within Key Watersheds, or at a minimum, no net increase.

### Implementation Monitoring

**Monitoring Question 1:** Are site specific Best Management Practices, identified as applicable during interdisciplinary review, carried forward into project design and execution?

**Monitoring Requirement:**

All management activities using best management practices will be monitored to determine whether best management practices are incorporated into the project design. At least twenty percent of the timber sales, silviculture projects, or other ground disturbing activities stratified by management category will be randomly selected for monitoring to determine whether or not best management practices were implemented as prescribed. The selection of management actions to be monitored will be based on beneficial uses likely to be impacted, and for which best management practices are being prescribed.

**Monitoring Performed:** In FY 2003, one project on the resource area that is expected to have ground disturbing activities was selected for quantitative soil bulk density and areal extent of soil disturbance monitoring. Pretreatment quantitative soil monitoring was initiated on the Saddled Again Timber Sale. Post-treatment monitoring was completed on the Bly Mountain TS (pre-treatment monitoring was initiated in FY 2002). Measurements of stream shading were conducted on eight streams that will be the focus of riparian reserve understory thinning and juniper removal projects in FY 2004 (four sites each on the East Branch of the Lost River and Johnson, East Fork Johnson, West Fork Johnson, Sheepy, and Pitchlog Creeks; two sites each on Antelope and Ben Hall Creeks).

**Findings:** The resource area is measuring the areal extent of soil disturbance and changes in soil bulk density for pretreatment samples as compared to posttreatment samples. To accomplish this, a statistically significant number of pretreatment baseline soil samples were collected and processed for these four projects. When these projects are complete, post treatment soil bulk density samples will be collected, processed, and compared to the pre treatment samples to determine if soil resources are being detrimentally impacted as per RMP and regional standards and guidelines for detrimental soil impacts (Meurisse 1997).

Stream shading measurements will be used to assess the effectiveness of BMPs designed to minimize short-term impacts to thermal regimes as a result of restoration-oriented silvicultural treatments. Post-treatment measurements will be conducted in FY 2004.

**Conclusion:** Resource Management Plan (RMP) objectives for limiting soil disturbance have been met.

**Comment/Discussion:** Quantifying soil disturbance enables resource area staff to determine whether resource management plan objectives for protecting soil resources are being met. Soil monitoring on the resource area is a long term program.

To date, quantitative soil monitoring has been conducted on three resource area timber sales: Kakapoo Stew timber sale in FY 1998, FY 1999, with analysis in FY 2000; Frosty Too timber sale in FY 1997-1998; and Grenada East timber sale in FY 2000, and FY 2001. In FY 2001, pretreatment quantitative soil monitoring was completed on an additional four project areas. Pending completion of these projects, post-treatment soil monitoring and analysis began in FY 2003 and will be completed in FY 2004. The results from soil monitoring on these timber sales and other ground disturbing projects will be considered in the layout of future resource area timber sales/projects, and in the design of future soil monitoring programs.

**Monitoring Question 2:**

Are the prescribed actions, programs and interagency coordination efforts called for in the NFP Record of Decision Standards and Guidelines and resource management plan management direction being conducted?

**Monitoring Performed:** Review of timber sale and project files and monitoring of ground disturbing activities.

**Findings:** Management actions and programs are being conducted to meet or move towards desired future water and soils conditions. Riparian reserve treatments are being implemented to move towards Aquatic Conservation Strategy objectives. In coordination with Oregon Department of Environmental Quality, the resource area is supporting the development of TMDLs (Total Maximum Daily Loads) and WQRPs (Water Quality Restoration Plans) for streams within the resource area. In late FY 2003, the TMDL and associated USFS/BLM WQRP for the Upper Klamath Lake drainage was completed. An interim WQRP was initiated for riparian projects in the Gerber Block.

Soil productivity requirements are being maintained and improved in timber sales and other projects. Existing road mileage in the Spencer Creek watershed is being reduced. Riparian reserves are being managed to meet ACS objectives.

**Monitoring Question 3:** What watershed analyses have been or are being performed? Are watershed analyses being performed prior to management activities in key watersheds?

**Findings:** See Table M-7 describing the completed and ongoing watershed analyses.

**Table M-7 - Status of Watershed Analysis**

<b><u>Watershed Analyses Completed</u></b>	<b><u>Key Watersheds Present</u></b>	<b><u>Completion Date</u></b>
Spencer Creek Watershed Analysis	Spencer Creek & Clover Creek	August 1995
Jenny Creek Watershed Analysis	Jenny Creek	February 1995
Topsy-Pokegama Landscape Analysis	None	July 1996
Gerber/Willow Valley Watershed Analysis	None	July 2003

**Conclusion:** Watershed analyses have been completed for 77% of the KFRA, including all key watersheds and essentially all BLM managed lands west of Highway 97. A watershed analysis covering approximately 112,000 acres on the eastside of the resource area (Gerber-Upper Lost River Watersheds) was completed in FY 2003. The Spencer Creek watershed analysis will eventually be updated with the new GIS Hydrology theme, the recently completed Spencer Creek Road Inventory, and new water temperature data. Portions of the Topsy-Pokegama Landscape Analysis will be updated in the Affected Environment section of the Upper Klamath River Management Plan/EIS.



The findings and recommendations of watershed analyses are incorporated in project design.

**Monitoring Question 4:**

What is the status of identification of in-stream flow needs for the maintenance of channel conditions, aquatic habitat, and riparian resources?

**Findings:** The BLM is cooperating with PacifiCorp and numerous other stakeholders to develop and implement studies as part of the relicensing of the Klamath Hydroelectric Project. Some of these studies focus on the relationships between instream flow, aquatic habitat, water quality, and riparian vegetation. These studies will be used to determine flow regimes that will be incorporated in the new license for the Project.

**Monitoring Question 5:** What watershed restoration projects are being developed and implemented?

**Findings:** In addition to the projects described in the Aquatic Conservation Strategy section, other restoration projects are being developed as part of the Klamath River Management Plan/EIS and other project level analyses.

Project planning is underway for bringing an under-sized culvert up to NFP standards; enhancing aspen stands; removing, realigning, and improving roads; and constructing fences to better manage livestock grazing near riparian areas.

**Conclusion:** Watershed restoration projects are being developed and implemented to meet the RMP and ACS objectives.

**Monitoring Question 6:** What fuel treatment and fire suppression strategies have been developed to meet Aquatic Conservation Strategy Objectives?

**Findings:** BMPs for the protection of soils, water, and riparian resources are being implemented during prescribed fire activities. Silvicultural prescriptions involving understory thinning treatments are being implemented in riparian reserves to reduce potential fuel loads to decrease the risk of catastrophic fires. These treatments are designed to improve forest health and meet the Aquatic Conservation Strategy objectives.

**Conclusions:** Fuel treatment prescriptions are being implemented to meet ACS and RMP objectives.

**Monitoring Question 7:** What is the status of development of road or transportation management plans to meet Aquatic Conservation Strategy Objectives?

**Findings:** A Transportation Management Plan (TMP) has been developed for lands covered by the NFP ROD. Inventories of existing road conditions and their potential to effect the attainment of ACS objectives have been completed in the Spencer Creek watershed, the Klamath River canyon, and the Gerber and Upper Lost River watersheds. This data will be used to supplement the existing TMP. A TMP is currently underway for the eastside of the resource area. Analysis of roads and road treatment options is done during timber sale planning.

**Conclusions:** A Transportation Management Plan has been developed and will be revised and supplemented with additional data from road inventories and project analyses.

**Monitoring Question 8:** What is the status of preparation of criteria and standards which govern the operation, maintenance, and design for the construction and reconstruction of roads?

**Findings:** A Transportation Management Plan has been developed for lands covered by the NFP ROD. Roads, culverts, and bridges are designed, constructed and maintained in accordance with policies and standards set forth in BLM 9100 Series Manual and the Best Management Practices (BMP). Maintenance levels are assigned to each road reflecting the appropriate maintenance that fits the Transportation Management Objectives (TMO) for the planned management activity.

The ongoing road sediment studies in the Spencer Creek and Gerber-Upper Lost River watersheds will help refine the standards for road construction and maintenance. The study will examine the effects of several parameters including slope, road surface material, and drainage factors.

**Conclusions:** Progress is being made on development of the criteria and standards for roads.

**Monitoring Question 9:** What is the status of the reconstruction of roads and associated drainage features identified in watershed analysis as posing a substantial risk? What is the status of closure or elimination of roads to further Aquatic Conservation Strategy Objectives, and to reduce the overall road mileage within all watersheds? If funding is insufficient to implement road mileage reductions, are construction and authorizations through discretionary permits denied to prevent a net increase in road mileage in Key Watersheds?

**Findings:** During FY 2003, four road-related restoration projects were completed. In the Spencer Creek watershed, 3.2 miles of road were obliterated, 8.5 miles were decommissioned, 0.5 miles of road were constructed (to facilitate road obliteration within a riparian reserve), and two culverts were removed. As part of the Kerwin Ranch meadow restoration project in the Klamath River canyon, about 0.5 miles of road were improved and about 800 feet of road were decommissioned. As part of an effort to reduce sediment delivery to streams in the Gerber Block, five road segments that cross fish-bearing streams were improved and 200 feet of road were obliterated. Finally, in the vicinity of the Keno Access road, fill material from a previously decommissioned stream crossing was moved away from an intermittent stream.

Project planning is underway for additional road treatments in the Spencer Creek watershed, including retrofitting or replacement of the culvert on the Spencer Creek Hook-Up road.

**Conclusions:** Progress is being made in reducing overall road mileage and density and reducing the impacts of roads on water quality and aquatic/riparian habitat.

**Monitoring Question 10:** What is the status of reviews of ongoing research in key watersheds to insure that significant risk to the watershed does not exist?

**Monitoring Requirement:** Review of existing and proposed research activities in key watersheds and riparian reserves.

**Findings:** No formal research activities are being conducted in key watersheds or riparian reserves in the Klamath Falls Resource Area. However, as part of an effort to understand the effects of juniper management on watershed processes, vegetation and infiltration measurements were taken in and adjacent to areas in the vicinity of Norcross Springs that were manually treated in 1993. A report describing the findings of this monitoring will be prepared in FY 2004.

**Monitoring Question 11:** What is the status of evaluation of recreation, interpretive and user-enhancement activities/facilities to determine their effects on the watershed? What is the status of eliminating or relocating these activities/facilities when found to be in conflict with Aquatic Conservation Strategy objectives?



**Findings:** An evaluation of existing recreation facilities inside riparian reserves has not been completed to date.

**Monitoring Question 12:** What is the status of cooperation with other agencies in the development of watershed-based Coordinated Resource Management Plans and other cooperative agreements to meet Aquatic Conservation Strategy objectives? What is the status of cooperation with other agencies to identify and eliminate wild ungulate impacts which are inconsistent with attainment of Aquatic Conservation Strategy objectives?

**Findings:** A Coordinated Resource Management Plan was developed for the Spencer Creek Watershed in 1994 by a group consisting of several government agencies, private companies and individuals. Many individual and cooperative projects have been implemented to address concerns from the plan. The group continues to meet on a regular basis to address resource management concerns on both public and private land.

Resource concerns on private and public lands west of Highway 97 are also addressed through the Pokegama Cooperative Habitat Project, which is an alliance of government agencies, private companies, citizens groups and organizations, and individuals.

No detrimental impacts from wild ungulates have been identified. The Pokegama Cooperative Habitat Project group and the BLM will address any impacts if they are identified.

The Gerber/Willow Valley Watershed Analysis was completed in FY 2003. This document will provide information to the associated CRMP group.

**Conclusions:** Cooperative agreements and planning efforts are being developed to meet RMP and ACS objectives.

**Monitoring Question 13:** Are management practices achieving the goal of maintaining long-term site productivity by avoiding, minimizing, or ameliorating soil compaction, displacement, surface erosion, and loss of organic material, including coarse woody debris?

**Monitoring Requirement:** All management activities using best management practices will be monitored to determine whether best management practices are incorporated in the project design.

At least twenty percent of the timber sales, silviculture projects, or other ground disturbing activities stratified by management category will be randomly selected for monitoring to determine whether or not best management practices were implemented as prescribed. The selection of management actions to be monitored will be based on beneficial uses likely to be impacted, and for which best management practices are being prescribed.

**Monitoring Performed:** In FY 2003, the Bly Mountain TS soil monitoring was completed. The Saddled Again TS was selected for soil disturbance monitoring.

**Findings:** See Findings under Water and Soils, Implementation Question 1.

**Conclusions:** See Conclusion under Water and Soils, Implementation Question 1.

**Comment/Discussion:** The issue of soil health on the resource area is being investigated by quantifying disturbance levels. Concerns have been raised on the resource area about excessive soil compaction possibly occurring with repeated use of a mechanical harvester, mechanical slashbuster, or combination of both in a forest stand or juniper woodland over time. Use of a mechanical harvester/slashbuster results in greater areal ground disturbance since it is not confined to skid roads, although in theory a mechanical harvester reportedly causes less soil compaction since it exerts less pounds per square inch of force/pressure than

other ground-based harvesting machinery. Since use of a mechanical harvester/slashbuster is becoming more and more common and is the most economical choice for density-management treatment of forest stands and juniper woodlands, the resource area is measuring the areal extent of soil disturbance and changes in soil bulk density in representative ground disturbing projects to evaluate soil health.

Findings from monitoring done in 1998 in one timber sale area suggest that detrimental soil compaction, as defined by Forest Service Region 6 and resource area standards and guidelines, may have occurred. Findings from monitoring done in a different timber sale area in 1998, 1999 and completed in 2000 suggest that the threshold for detrimental compaction (15 percent increase in bulk density) was approached. Areal extent of soil disturbance monitoring conducted in a timber sale in FY2000 and FY 2001 was within the standards and guideline recommendations. However, multiple years of monitoring mechanical harvester/slashbuster use are needed before drawing any conclusions about soil compaction. Consequently, the resource area will continue monitoring representative projects using quantitative methods in order to accumulate more data from which conclusions about the areal extent and degree of soil compaction resulting from the use of a mechanical harvester/slashbuster can be made. Copies of the soil monitoring reports, detailing methods and results, can be obtained at the resource area office.

## Terrestrial Species Habitat

### Expected Future Conditions and Outputs

- Maintenance of biological diversity and ecosystem health to contribute to healthy wildlife populations, consistent with BLM's Fish and Wildlife 2000 plan and other nationwide initiatives.
- Maintenance of desired conditions in each special habitat (such as meadows, wetlands, and cliff/talus slopes), plus desired conditions in buffers at least 100 feet wide around dry meadows, and wooded swamps.

### Implementation Monitoring

**Monitoring Question 1:** Are suitable (diameter, length and numbers of) snags, coarse woody debris and green trees being left, in a manner that meets the needs of species and provides for ecological function in harvested areas as called for in the SEIS Record of Decision Standards and Guidelines and RMP management direction?

**Monitoring Requirement:** At least 20 percent of regeneration harvest timber sales in each resource area will be examined by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters, and distribution within harvest units. The measure of distribution of snags and green trees will be the percent in the upper, middle and lower thirds of the sale units monitored. Snags and green trees remaining following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

The same timber sales will be inventoried pre- and post-harvest to determine if SEIS Record of Decision and RMP down log retention direction has been followed.

**Monitoring Performed:** Three sale areas were monitored in FY 2003 - Bull Springs, Bly Mountain, and Clover Hookup. Thermal clumps were identified and established to meet wildlife objectives in timber sale areas. Project design features for retention of coarse woody debris and snag retention were implemented in fuel treatment units. (Refer to the monitoring section in the APS for further discussion.)



**Monitoring Question 2:** Are special habitats being identified and protected?

**Monitoring Requirement:** At least 20 percent of BLM actions, within each resource area, on lands including or near special habitats will be examined to determine whether special habitats were protected.

**Monitoring Performed:** Surveys for Survey and Manage species such as the great gray owls and terrestrial mollusks are conducted prior to ground-disturbing activities. Big sagebrush, bitterbrush, and mountain mahogany patches were flagged and retained as unique habitat features in certain fuel treatment areas. Aspen stands and big sagebrush/shrub steppe habitat throughout the resource area were identified for treatment and improvement. Multiple new nest sites were identified and protected in FY 2003.

**Findings:** Special habitats are identified and protected through project design that avoids these habitats or by creating reserves within the project areas. Buffers and seasonal restrictions are also included in the project design features. Wildlife biologists often participate in the actual layout to ensure that special habitats get proper recognition and protection. Biologists also participate in the fuels program to identify objectives of the treatment that are compatible with special habitats.

**Monitoring Question 3:** What is the status of designing and implementing wildlife restoration projects?

**Monitoring Performed:** The Linkville Academy volunteered to collect native grass, mahogany, and bitterbrush seed for future plantings. They collected approximately 255 pounds of seed in 2003. ODFW contributed funds to have the seed cleaned. Projects completed to improve habitat in FY 2003 were: 1) planting of Bitterbrush and Mountain mahogany seedlings at three different locations, 2) mechanical and manual removal of juniper trees on historic sage grouse leks and big-game winter ranges, and 3) manual removal of encroaching juniper in meadow areas. In addition, three oak thin units in the Klamath River Canyon were treated with prescribed fire and three new units were laid out. The Kerwin Ranch Meadow restoration project in the Klamath River Canyon was completed. In 2003, fuels reduction treatments were conducted around two bald eagle nest sites for enhancement and protection.

Various bird nest boxes and bat boxes were erected throughout the resource area.

**Findings:** Several projects have been designed and implemented to improve habitat for wildlife. Fuels reduction projects were designed around eagle nest sites and range improvement projects were implemented to benefit sage grouse and landbirds.

**Monitoring Question 4:** What is the status of designing and constructing wildlife interpretive and other user-enhancement facilities?

**Monitoring Performed:** The Wood River Wetland Interpretive Project continued to develop in FY 2003.

**Findings:** Actions in 2003 continued to develop and design a wildlife interpretive center, signs, and improved trail system in the Wood River Wetland area. Discussions are continuing to develop programs along the Upper Klamath River and in the Gerber/Willow Valley reservoir area.

**Monitoring Question 5:** Are elk herds on BLM-administered lands stable or increasing?

**Monitoring Performed:** Various wildlife surveys were performed in 2003. In the Fox Lake area, a replacement cistern/guzzler was installed. Annual cistern maintenance and repair was also conducted. In addition, native grasses were seeded and bitterbrush and mountain

mahogany seedlings were outplanted in several known or potential elk winter range areas. In many areas, roads were closed, decommissioned, or obliterated. Specifically, 13 miles of roads in the Spencer Creek area were closed in FY 2003.

**Findings:** According to Oregon Department of Fish and Wildlife (ODFW) informal herd counts, elk are increasing in number in the Klamath Falls Resource Area.

**Monitoring Question 6:** Are range conditions stable or is there obvious competition between resources?

**Monitoring Performed:** See the response to the "Grazing Management" question #1 in regards to studies and monitoring that address the range condition stability.

In addition, one wildlife specific rangeland monitoring study type has been performed over the past 10 years on some priority wildlife winter range (or potential winter range) allotments - the Modified Cole Browse study. This study measures the post-growth and post-livestock grazing utilization on key browse species in the fall. Then, as a comparison, measurements are taken of the post-winter and pre-growth utilization level in the spring (i.e. measures winter use by wildlife). These measurements are periodically performed on wedgeleaf ceanothus and serviceberry on the KFRA's westside and on antelope bitter brush on the eastside.

**Findings:** In general, all studies have found range conditions to be stable to improving on the vast majority of the BLM administered lands in the KFRA. Also, see the response to Question #1 in "Grazing Management".

Summarized findings to date are that livestock (cattle) and wild horses (westside only) make little use of any of the shrub species, with a couple exceptions. Cattle and, in particular, wild horses, will make occasional significant use (i.e., moderate or higher) on serviceberry on the westside; neither make significant summer use of the wedgeleaf ceanothus. On the eastside of the KFRA, cattle will make similar occasional significant use (moderate to heavy) on bitterbrush, but only in the few areas that receive significant livestock use after approximately August 15<sup>th</sup>.

**Conclusions:** Rangeland conditions are apparently stable or improving on most of the BLM administered lands within the KFRA. The recently completed Ecological Site Inventory showed this to be true on the Gerber Block. Also, see response to Question #1 in "Grazing Management".

There are no particular resource concerns with shrub use within the KFRA. The westside use on the serviceberry is insignificant because that shrub is an insignificant part of the vegetation communities. Wedgeleaf ceanothus is vastly more abundant and is not being impacted at present by summer livestock (or wildlife) use. On the eastside, the areas that have received moderate or higher bitterbrush use are extremely small and in areas that are rarely, if ever, used by wintering deer or elk. No studies have found any significant resource competition issues between large wildlife herbivores and livestock on the BLM lands.

**Monitoring Question 7:** Are facilities or improvements functional and providing desired management results?

**Monitoring Requirement:** Maintain and check management facilities (such as guzzlers, springs, road closures, etc.) periodically to ensure that they are functioning properly.

**Monitoring Performed:** Currently, 10 cisterns and 24 spring developments in the resource area are being maintained for wildlife. The cisterns are located throughout the resource area in areas where water is not plentiful. In the past, maintenance of these water sources was through a challenge cost share with the Oregon Department of Fish and Wildlife. In 2003,



these springs and guzzlers were checked by volunteers, fire crew members and a BLM biologist. Major repairs were scheduled through the range program. In the Fox Lake area, a replacement cistern/guzzler was installed.

Various bird nest boxes and bat boxes were erected throughout the resource area.

In the Gerber area, approximately 96 goose nesting platforms and 11 wood duck nesting-boxes are maintained. Nest boxes are monitored for success and for needed repairs. Additional areas that could support nesting structures and water developments are periodically reviewed.

Seasonal road closures are visited biannually. Permanent road closures are checked on an annual basis.

**Findings:** Severe damage to locks and road closure gates throughout the KFRA is a continual problem. Many of the locks are being shot and the gates opened, and/or vehicles are driving around the closures.

**Conclusions:** More time and effort needs to be given to wildlife improvements. Project files have been updated with current maps created in GIS. Due to the decreased effectiveness of the Gerber area closures, a project to replace the existing cable closures with more effective pipe gate closures is being considered. A challenge cost share project proposal with US Timberlands to eliminate unneeded roads on the west side of the resource area is ongoing. The roads are being closed to benefit wildlife habitat and alleviate maintenance problems. An increased monitoring effort will be proposed with help from the Oregon Department of Fish and Wildlife, Oregon State Police, and local conservation groups. This may alleviate some of the closure violations and damage to the gates.

Road closure maintenance in the Surveyor Mountain area will be coordinated with the Upper Spencer Creek Road inventory study. This project plans to treat erosion problems on identified roads and repair road closures.

All water improvements for wildlife will be revisited and reviewed in summer of FY 2004.

**Monitoring Question 8:** Is the BLM protecting special habitats as provided for in the RMP?

**Monitoring Requirement:** Examine 20 percent of BLM actions on lands containing or near special habitats to determine whether special habitats were protected as provided for in the RMP. Monitor the effects of BLM management on wildlife species using a variety of methods. Coordinate surveys of game species with the Oregon Department of Fish and Wildlife. Conduct monitoring of other species and habitats as needed, such as Neotropical migratory landbirds by vegetation community, individual species surveys when needed, and vegetation surveys as part of the timber and range management activities.

**Monitoring Performed:** Riparian zones are marked and managed according to the Aquatic Conservation Strategy. Raptor nest sites are protected with buffers and nest season restrictions. Special habitats (such as talus slopes, seeps and springs, etc.) are identified during the planning phase of the activities and protected during the design and implementation phase using the Best Management Practices identified in the RMP. Other habitats such as meadows important to Great Gray Owls and big game species are identified during surveys, and buffers are established during timber sale preparation. Landbird surveys were continued in special habitats identified as a concern by the Western Working Group of Partners in Flight.

Surveys are being conducted for landbirds in the Klamath River Canyon, Wood River, grazing allotments, and Gerber Reservoir in cooperation with the Klamath Bird Observatory and Pacific Southwest Research Station of the USFS. Partners in the project included World

Wildlife Fund, Point Reyes Bird Observatory, Klamath Basin National Wildlife Refuge, and Winema NF. Data compiled has been and will be used for BLM's evaluation of the FERC relicensing of power projects on the Klamath River, the proposal to raise Gerber Dam, the COB Power Plant proposal, and fuel treatments.

A study of landbirds in habitats including sagebrush steppe, juniper/sagebrush, old growth juniper, and juniper/ponderosa pine, was continued. The purpose of this multi-year study is to evaluate the conditions and trends within these habitat types for assessment of management actions related to juniper harvest treatments.

The Gerber Watershed Carnivore Survey was continued, which involved the use of baited camera stations and snow track surveys to detect specific "target" species including the marten, fisher, lynx, wolverine, and other forest carnivore species.

**Findings:** District Designated Reserve Buffers (DDRBs) have been established around all spotted owl nest cores, per RMP guidance. The need for special spotted owl habitat silvicultural prescriptions within these DDRBs is evaluated during timber sale planning for potential habitat improvement.

Boundaries for Great Gray Owl buffers were posted around approximately 275 acres of meadows and natural openings in 1999. Within the Muddy Tom Timber Sale area, a portion of the buffer area was identified for habitat enhancement and a silvicultural prescription was developed. In FY 2000, pretreatment stand exams were conducted within these Great Gray Owl meadow buffers. Photo-monitoring plots were established in 2001-2002.

Studies of landbirds are ongoing and site-specific analysis has not yet been completed.

**Conclusions:** Special habitats specified in the RMP are being provided for as they are identified.

**Monitoring Question 9:** Is the average width of undisturbed buffers retained following timber harvest and site preparation activities as specified in the RMP?

**Monitoring Requirement:** Determine average buffer widths by measurements at approximately equidistant points around the affected unique habitat within each timber sale unit.

**Monitoring Performed:** Buffers are checked during the post timber sale reviews on 20 percent of the sales. Nest buffers for owls, eagles, and accipiters are visited annually during nesting and reproductive success monitoring efforts.

**Findings:** Buffers are marked and managed according to NFP and RMP guidelines. The average width of buffers established according to the NFP and RMP are being retained following timber harvests.

## **Special Status and SEIS Special Attention Species Habitat**

### **Expected Future Conditions and Outputs**

- Protection, management, and conservation of federal listed and proposed species and their habitats, to achieve their recovery in compliance with the Endangered Species Act and Bureau special status species policies.
- Conservation of federal candidate and Bureau sensitive species and their habitats so as not to contribute to the need to list, and recover the species.
- Conservation of state listed species and their habitats to assist the state in achieving management objectives.
- Maintenance or restoration of community structure, species composition, and



ecological processes of special status plant and animal habitat.

- Protection of Bureau assessment species and SEIS special attention species so as not to elevate their status to any higher level of concern.

## Implementation Monitoring

### Monitoring Question 1:

A) Are special status species being addressed in deciding whether or not to go forward with forest management and other actions?

B) During forest management and other actions that may disturb special status species, are steps taken to mitigate or avoid disturbances?

**Monitoring Requirement:** At least 20 percent of the files on each year's timber sales, range improvements, grazing decisions, and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding special status species and related recommendations and decisions in light of the Endangered Species Act requirements, policy and SEIS Record of Decision Standards and Guidelines, and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

**Monitoring Performed:** Review of the following projects for Survey and Manage species: Sheepy Creek riparian thin, Shady slashbusting, and West Spencer TS.

**Findings:** All areas where forest management or other ground disturbing actions are to take place are surveyed to protocol before the project implementation for Survey and Manage Species (Table 1-1 2001 ASR). If any listed species are found they are managed according to the Management Recommendation in the NFP and resource area guidelines.

### **Animals**

#### *Northern Spotted Owl*

Northern spotted owls were adequately addressed to protocol in all of the timber sale areas and fuel treatment units mentioned. Seasonal restrictions have been placed in all appropriate areas to avoid disturbance.

#### *Northern Goshawk*

Northern goshawk were adequately addressed to protocol in all of the timber sale areas and fuel treatment units mentioned. Seasonal restrictions have been placed in all appropriate areas to avoid disturbance.

#### *Great Gray Owl*

Great gray owls were adequately addressed to protocol in all of the timber sale areas and fuel treatment units mentioned. Seasonal restrictions have been placed in all appropriate areas to avoid disturbance.

#### *Bald Eagles*

Bald eagles were adequately addressed to protocol in all of the timber sale areas and fuel treatment units mentioned. Seasonal restrictions have been placed in all appropriate areas to avoid disturbance.

#### *Sage Grouse*

Sage grouse were adequately addressed to protocol in all of the fuel treatment units mentioned. Seasonal restrictions have been placed in all appropriate areas to avoid disturbance.

### *Mollusks*

#### Terrestrial

One Survey and Manage terrestrial mollusk has been found on the resource area. this site will be managed as a known site. During the spring of 2003, surveys according to protocols of potential habitat were conducted in the Chase area of the CHEW Timber Sale and Sheepy Creek Riparian thin.

#### Aquatic

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. Aquatic mollusks were found in Upper Johnson Creek. They are *Fluminicola* sp. and were sent to experts for identification to species. No sites of *Fluminicola* were found in any of the other pre-disturbance project areas. These sites will be managed as Known Sites and will be buffered with 160 foot buffers. The sites will be revisited following project completion.

We revisited East Miner's Creek Culvert project a Known Site for *Fluminicola* sp. The culvert replacement project was completed. We found *Fluminicola* sp. populations in the same locations as the pre-disturbance survey. This indicates that the management actions taken provided protection for this site.

#### **Plants**

##### *Vascular Plants*

Approximately 26,740 acres of systematic inventory for botanical resources was conducted on the resource area. Several new sites of special status species were found, including one site of disappearing monkey flower (*Mimulus evanescens*), a Bureau Sensitive species new for the resource area. Two additional small patches of Baker's globe mallow (*Iliamna bakeri*) were also documented. Twenty-two patches of another Bureau Sensitive species, green-flowered ginger (*Asarium wagneri*), were also found. Inventory was accomplished with BLM resource specialists and consultants through an IDIQ contract with a multiple award to three contractors

The largest population of *Iliamna bakeri* found in 2002 was fenced and the other known sites were revisited. These areas will be surveyed again next year. The *Cypripedium montanum* sites were revisited. Two sites were in the Clover Hookup TS logged in FY 2002. The buffers were intact and the same number of plants were present.

**Conclusions:** Special status species are being addressed in deciding whether or not to go forward with forest management and other actions, and steps are taken to mitigate or avoid disturbances.

**Monitoring Question 2:** Are the actions identified in plans to recover species being implemented in a timely manner?

**Monitoring Requirement:** Review implementation schedule and actions taken annually, to ascertain if the actions to recover species were carried out as planned.

**Monitoring Performed:** Programs were reviewed for compliance with recovery plans.

#### **Findings:**

##### **Animals**

Recommendations contained in the NFP and consultations on individual projects were followed closely.

##### **Plants**

No Federally listed threatened or endangered plant species occur on BLM land administered by the Klamath Falls Resource Area. Therefore, no recovery plans have been developed for plant species, which occur in the resource area. The resource area botanist has evaluated the recovery plan and actions for the federally listed (endangered) Applegate's milkvetch (*Astragalus applegatei*). This species is endemic to the Klamath Basin, but no known populations occur on federal lands.



**Conclusions:** Actions identified in plans to recover species are being implemented in a timely manner.

**Monitoring Question 3:** What coordination with other agencies has occurred in the management of special status species?

**Monitoring Requirement:**

The Annual Program Summary will address Implementation Question 3.

**Monitoring Performed:** The KFRA coordinated sage grouse lek surveys with ODFW in FY 2003. Coordination and consultation continued with the USFWS on timber sales, forest health and fuel treatment projects, and any projects with potential impact to threatened and endangered species in FY 2003.

We have coordinated with adjacent landowners (UST) on management of northern spotted owls, bald eagles, and great gray owls. These practices include surveying for spotted owls, agreeing on core areas, coordinating timber management and silvicultural practices, and monitoring of nesting activity before, during, and after projects.

The KFRA continued to communicate with USFWS, ODFW, the Klamath Tribes, Oregon Division of State Lands, Bureau of Reclamation, and several private organizations about the Wood River Wetland restoration effort.

**Findings:** Coordination and cooperation with multiple agencies is a continuous process in project planning and implementation on the Klamath Falls Resource Area.

**Conclusions:** Coordination with other agencies has occurred in the management of special status species.

**Monitoring Question 4:** What land acquisitions occurred or are underway, to facilitate the management and recovery of special status species?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 4.

**Monitoring Performed:** Reviewed potential land acquisitions.

**Findings and Conclusions:** No land acquisitions occurred or are underway, to specifically facilitate the management and recovery of special status species.

**Monitoring Question 5:** What site-specific plans for the recovery of special status species were or are being developed?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 5.

**Monitoring Performed:** Program review.

**Findings:**

**Animals**

The KFFO is not currently involved in the development of any site-specific recovery plan.

**Plants**

Botanical surveys in FY 2002 documented several populations of Baker's globe mallow (*Iliamna bakeri*), a Bureau sensitive species new for the resource area. Qualitative monitoring noted that livestock grazing severely impacted the vegetative portions of this plant. An exclosure fence was constructed around the largest of these populations in FY 2003 to document the effect of the removal of livestock grazing pressure.

**Conclusions:** Analyses that ascertain species requirements or enhances the recovery or survival of a species are ongoing.

**Monitoring Question 6:** What is the status of analysis, which ascertains species requirements or enhances the recovery or survival of a species?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 6.

**Monitoring Performed:** Program review.

**Findings:**

**Animals**

The KFFO continues to monitor all known sites for northern spotted owls, northern goshawks, and eagles. In addition we also survey potential habitat for spotted owls and great gray owls before we conduct any ground disturbing activity.

**Plants**

Botanical surveys in FY 2000 documented two populations of the profuse-flowered mesa mint (*Pogogyne floribunda*), a Bureau sensitive species that was new to the resource area. A Challenge Cost Share project was proposed in FY 2002 to develop a conservation assessment and strategy for this species. The project was funded for FY 2003 and field work began during the field season.

**Conclusions:** Analyses that ascertain species requirements or enhances the recovery or survival of a species are ongoing.

**Monitoring Question 7:** What is the status of efforts to maintain or restore the community structure, species composition and ecological processes of special status plant and animal habitat?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 7.

**Monitoring Performed:** Program review.

**Findings:**

**Animals**

Timber harvest prescriptions and fuels treatments continue to look at long term health of the ecosystem. The objectives of the prescriptions are to manage for a multi-storied stand that will be healthy and remain as habitat or return to functional habitat as soon as possible.

**Plants**

No efforts have been made specifically to maintain or restore the community structure, species composition and ecological processes of special status plant species habitat. However, the reintroduction of fire as an ecosystem process through the prescribed fire program may indirectly accomplish this objective since special status plant species are similarly adapted to fire as other plant species in the plant community of which they are a component. Known sites of S & M species are managed to protect the area from ground disturbing activities.

**Conclusions:**

Long-term ecosystem health is addressed in management of the timbered land and rangelands.



## Aquatic Species Habitat

### Expected Future Conditions and Outputs

(See also Aquatic Conservation Strategy Objectives)

- Maintenance or enhancement of the fisheries potential of streams and other waters consistent with BLM's Fish and Wildlife 2000 Plan, the Bring Back the Natives initiative, and other nationwide initiatives.
- Rehabilitation and protection of at-risk fish stocks and their habitat.

### Implementation Monitoring

**Monitoring Question 1:** Are at-risk fish species and stocks being identified?

**Monitoring Requirements:** The Annual Program Summary will report on the status of watershed analysis to, their habitat within individual watersheds, and restoration project needs.

**Monitoring Performed:** The Gerber/Willow Valley Watershed Analysis was completed during FY 2003. Work on at risk fish species in the analysis area was conducted. Two sucker species (shortnose and Lost River) are listed as endangered under the Endangered Species Act, as amended. Two additional species are managed as a Bureau sensitive species; Klamath River redband trout and Klamath largescale sucker. These fish species are present, to varying extents, within the analysis area.

**Findings:** One watershed analysis effort was completed in FY 2003 that identified at-risk fish species and stocks.

**Monitoring Question 2:** Are fish habitat restoration and enhancement activities being designed and implemented, which contribute to attainment of Aquatic Conservation Strategy Objectives?

**Monitoring Requirements:** The Annual Program Summary will report on the status of the design and implementation of fish habitat restoration and habitat activities.

**Monitoring Performed:** Project planning for Upper Spencer Creek restoration was conducted in 2003. Spencer Creek Culvert Replacement EA was initiated in FY 2003, to be completed in FY 2004. The culvert would be replaced with a structure intended to simulate natural stream characteristics. Additional instream actions may include rock weirs, log structures, bankfull bench treatments, and riparian vegetation enhancement. Instream large woody debris enhancement was recommended in the Spencer Creek Watershed Analysis.

In the Gerber Watershed, multiple stream crossings were enhanced in FY 2003, including installation of additional gravel and ditch adjustments. The project should help endangered shortnose suckers by reducing surface erosion reaching the stream network and thereby improving water quality.

Staff from both the KFRA and the Klamath Falls field office of the Bureau of Reclamation (BOR) identified low winter flows in Miller Creek as an adverse impact to redband trout and endangered suckers. As result of proposed alteration for raising Gerber Reservoir the BOR has proposed studying instream flow needs for fisheries resources in Miller Creek to augment aquatic habitat and prevent stranding in winter. In FY 2003, the BLM, BOR, and ODFW initiated a monitoring/assessment project on Miller Creek in order to determine fisheries population characteristics and potential entrainment from Gerber Reservoir in order to support proposed instream flow needs.

Extensive fish habitat restoration and enhancement activities have been proposed within the Klamath River Management Plan (EIS) boundary. The Draft Klamath River Management Plan/EIS, released for public comment in FY 2003, addresses current impacts to fisheries habitats and proposed protection, mitigation, enhancements in order to meet ACS objectives and WSRA Fisheries ORV objectives.

**Findings:** Fish habitat restoration and enhancement activities are being designed and implemented to contribute towards attainment of ACS objectives.

**Monitoring Question 3:** Are potential adverse impacts to fish habitat and fish stocks being identified?

**Monitoring Requirements:** The Annual Program Summary will report on the status of cooperation with federal, tribal and state fish management agencies to identify and eliminate impacts associated with poaching, harvest, habitat manipulation and fish stocking which threaten the continued existence and distribution of native fish stocks inhabiting federal lands. The APS will identify any management activities or fish interpretive and other user-enhancement facilities that have been detrimental effects on native fish stocks.

**Monitoring Performed:** There has been considerable cooperation between state, federal, and tribal biologists on the work being conducted and work being proposed at the Wood River project (see Wood River section). The project will have long term benefits to fish habitat but there have been short-term losses in habitat quality such as increased sediment which have been identified. These impacts have been mitigated in a number of ways (see Wood River section).

There has also been considerable cooperation between state, federal, and tribal biologists on the Klamath Hydro-electric relicensing project (#2082) to identify existing and potential adverse impacts to fish habitat and fish stocks.

The resource area staff have been cooperating with U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, U.S. Forest Service, The Nature Conservancy, U.S. Bureau of Reclamation, and U.S. Geological Survey-Biological Resources Division on redband trout, sucker, and bull trout working groups to develop and implement scientifically based management strategies for these species.

The resource area staff continues to coordinate with the range, timber, and fuels management programs in order to protect and improve the aquatic habitats. Through the interdisciplinary process actions that are identified as potentially affecting fishery and aquatic resources are identified and recommendations are made to avoid adverse impacts.

**Findings:** Adverse impacts to fish habitat and fish stocks are being identified and mitigation performed.

**Monitoring Question 4:** Are habitat improvement projects and opportunities being identified?

**Monitoring Requirements:** At least twenty percent of the files on each year's timber sales, and other relevant actions, will be reviewed annually to evaluate documentation regarding fish species and habitat and related recommendations and decisions in light of policy and NFP ROD Standards and Guidelines and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

**Monitoring Performed:** A review of project proposals, including watershed analysis, is performed throughout the year. Habitat improvement projects are typically designed as part of the proposed action or alternatives to the proposed action.



On the Klamath River Management Plan extensive time was spent reviewing aerial photography and additional GIS information in order to develop extensive recommendation for improving/enhancing the Klamath River within the Klamath River Management Plan (EIS) boundary. Proposed channel dimension treatments, bank treatments, and riparian vegetation treatments have been developed as a result of this review.

As a result of GAO funding, the resource area initiated an inventory of all culverts that could potentially interfere with fish passage. Over 40 culverts were surveyed. Culvert condition and passage effectiveness was assessed in order to prioritize future culvert treatments.

Significant time has been spent time in Gerber, Spencer Creek, and Klamath River areas reviewing existing road/stream crossings for extension of channel connections from road networks and sedimentation problems in most of the fish bearing reaches on BLM administered lands.

**Findings:** Habitat improvement projects and opportunities are being identified and designed into the overall management of the resource area.

**Monitoring Question 5:** Are fish populations adequate to provide present and expected future recreational needs?

**Monitoring Requirements:** Monitor lakes and fish populations, and stocks if necessary.

**Monitoring Performed:** The KFRA has several excellent recreational fisheries: the lower Wood River, the Klamath River, Four Mile Creek, Miller Creek, Spencer Creek, reservoirs of the Gerber/Willow Valley Watershed, and Topsy reservoir. Most stream fisheries are for redband trout, but Fourmile Creek contains brook trout as well. Reservoir fisheries are for multiple cold water and warm water game fish species.

**Findings:** Recreational needs for fisheries are growing in Klamath County. The resource area staff will need to assess and consult with ODFW and USFWS on these streams and watersheds in light of the increasing recreational demand. The potential exists for improving habitat to protect recreational fisheries against adverse impacts in order to continue to meet recreational needs. Miller Creek, Spencer Creek, and the Klamath River are on the EPA's (303d) list for impaired water quality for excessive sediment and temperature.

## **Noxious Weeds**

### **Expected Future Conditions and Outputs**

- Containment and/or reduction of noxious weed infestations on BLM-administered land using an integrated pest management approach.
- Avoidance of the introduction or spread of noxious weed infestations in all areas.

### **Implementation Monitoring**

**Monitoring Question 1:** Are noxious weed control methods compatible with Aquatic Conservation Strategy Objectives?

**Monitoring Requirements:** Review the files of at least twenty percent of each year's noxious weed control applications to determine if noxious weed control methods were compatible with Aquatic Conservation Strategy Objectives.

**Findings:** Noxious weed control applications in FY 2003 were conducted using an integrated pest management approach that includes manual, mechanical, chemical, and

biological control methods. These methods are used in accordance with the Klamath Falls Resource Area Integrated Weed Control Plan (IWCP) and Environmental Assessment (EA)(OR-014-93-09), which is tiered to the Northwest Area Noxious Weed Control Program EIS (December 1985) and Supplement (March 1987), and are compatible with Aquatic Conservation Strategy Objectives.

## Special Areas

### Expected Future Conditions and Outputs

- Maintenance, protection, and/or restoration of the relevant and important values of the special areas which include: Areas of Critical Environmental Concern, Research Natural Areas, and Environmental Education Areas.
- Preservation, protection, or restoration of native species composition and ecological processes of biological communities in research natural areas.
- Retention of existing research natural areas and existing areas of critical environmental concern that meet the test for continued designation. Retention of other special areas. Provision of new special areas where needed to maintain or protect important values.

### Implementation Monitoring

**Monitoring Question 1:** Are BLM actions and BLM authorized actions/uses near or within special areas consistent with resource management plan objectives and management direction for special areas?

**Monitoring Requirement:** Annually, the files on all actions and research proposals within and adjacent to special areas will be reviewed to determine whether the possibility of impacts on areas of critical environmental concern values was considered, and whether any mitigation identified as important for maintenance of areas of critical environmental concern values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether it was actually implemented.

**Monitoring Performed:** Review of program and actions for consistency with RMP objectives and direction.

**Findings:** The Wood River Area of Critical Environmental Concern (ACEC) has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints. The project has its own published annual monitoring report, covering a wide range of resources.

A prescribed fire originally planned for FY 2000 was implemented in 2003 and allowed to burn into the Old Baldy RNA/ACEC. Prescribed fire monitoring plots were established in FY 1999 and 2002 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program (ONHP). Additional vegetation and fuels data were collected in fall 2001, summer 2002, and immediately post-burn in 2003.

Treatment of noxious weed populations is conducted annually within the Klamath Canyon ACEC. An integrated management approach is used which includes chemical, mechanical and biological methods. Control of noxious weeds would help maintain and restore the biological, recreational and scenic resources for which the area was designated.

**Conclusions:** BLM actions and BLM authorized actions/uses near or within special areas are consistent with resource management plan objectives and management direction for special areas.



**Monitoring Question 2:**

What is the status of the preparation, revision, and implementation of areas of critical environmental concern management plans?

**Findings:** The Wood River ACEC has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints. Many of the restoration and interpretation actions have been completed, including river restoration, interpretive displays, and scenic view areas. Implementation and management direction has been closely coordinated with the Klamath Tribes. The project has its own published annual monitoring report, covering a wide range of resources.

Management of the Klamath Canyon ACEC was addressed in the Draft Upper Klamath River Management Plan and Environmental Impact Statement, released for public comment in April 2003. The final River Plan/EIS will be completed in 2005.

The Old Baldy RNA/ACEC was designated to fill the southern Cascades chaparral plant community cell. This community is thought to be partially maintained by fire. Therefore, prescribed fire conducted in FY 2003 was allowed to burn into the RNA. Prescribed fire monitoring plots were established in 1999 and 2002 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program. BLM staff collected pre-burn and immediate post-burn vegetation and fuels data. These actions will help maintain and protect the resource values for which the area was designated.

No other management plans for ACECs have been developed. However, all ACECs are managed to protect the relevant and important values, which were identified when they were evaluated and designated during the RMP process. General management direction for each special area is given in the Klamath Falls Resource Area Record of Decision and Resource Management Plan and Range Program Summary (pp. 41 - 42).

**Conclusions:** Management plans for some ACECs are being or have been developed and implemented.

**Monitoring Question 3:** What environmental education and research initiatives and programs are occurring in the research natural areas and environmental education areas?

**Findings:** The Old Baldy RNA/ACEC includes additional lands within the Medford District. A prescribed fire implemented in FY 2003 was allowed to burn into the RNA. Prescribed fire effects monitoring plots were established in 1999 according to protocols developed by the National Park Service to study the effects of fire on this plant community. These pre-burn data were collected by a researcher from the Oregon Natural Heritage Program and BLM staff. Additional vegetation and fuels data were collected in Fall 2001, Summer 2002, and immediately post-burn in 2003.

The Clover Creek Environmental Education Area is the site of an annual Forestry School Tour. Sixth graders from all over Klamath County learn about reforestation, tree identification, soil and water conservation, fire, wildlife and outdoor recreation. This three-day event includes about 80 kids and a number of agencies including BLM, USFWS, USFS, ODFW, ODF and several private and county groups.

**Conclusions:** Environmental education and research initiatives and programs are occurring in the research natural areas and environmental education areas.

**Monitoring Question 4:** Are existing BLM actions and BLM authorized actions and uses not consistent with management direction for special areas being eliminated or relocated?

**Findings:** BLM actions and BLM authorized actions/uses near or within special areas are consistent with resource management plan objectives and management direction for special areas.

**Monitoring Question 5:**

A) Are actions being identified which are needed to maintain or restore the important values of the special areas?

B) Are the actions being implemented?

**Findings:** The Wood River ACEC has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints. Many of the restoration and interpretation actions have been completed, including river restoration, interpretive displays, and scenic view areas. Implementation and management direction has been closely coordinated with the Klamath Tribes. The project has its own published annual monitoring report, covering a wide range of resources.

The Old Baldy RNA/ACEC was designated to fill the southern Cascades chaparral plant community cell. This community is thought to be partially maintained by fire. Therefore, prescribed fire planned for FY 2003 will be allowed to burn into the RNA. Prescribed fire monitoring plots were established in 1999 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program. These actions will help maintain and protect the resource values for which the area was designated.

Treatment of noxious weed populations is conducted annually within the Klamath Canyon ACEC. An integrated weed management approach is used which includes chemical, mechanical and biological methods. Control of noxious weeds would help maintain and restore the biological, recreational and scenic resources for which the area was designated.

**Conclusions:** Actions are being identified which are needed to maintain or restore the important values of the special, and the actions are being implemented.

## **Wild and Scenic Rivers**

### **Expected Future Conditions and Outputs**

- Protection of the Outstandingly Remarkable Values of designated components of the national Wild and Scenic Rivers System through the maintenance and enhancement of the natural integrity of river-related values.
- Protection of the Outstandingly Remarkable Values of eligible/suitable Wild and Scenic Rivers and the maintenance or enhancement of the highest tentative classification pending resolution of suitability and/or designation.
- Designation of important and manageable river segments suitable for designation where such designation contributes to the National Wild and Scenic Rivers System.

### **Implementation Monitoring**

**Monitoring Question 1:** Are BLM actions and BLM authorized actions consistent with protection of the Outstandingly Remarkable Values of designated or suitable rivers?

**Monitoring Requirements:** Annually, the files on all actions and research proposals within and adjacent to Wild and Scenic River corridors will be reviewed to determine whether the possibility of impacts on the Outstandingly Remarkable Values was considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether mitigation was actually implemented.



**Monitoring Performed:** The KFRA conducted prescribed fire in previous Oak thin/Juniper Removal areas in FY 2003 on four parcels of land within the Upper Klamath Wild and Scenic River corridor. Mitigation measures were identified during project planning and environmental analysis to protect and enhance the Outstandingly Remarkable Scenic Value. Analysis of the on-the-ground affects after project completion indicated that the mitigation measures were followed and the overall project met or exceeded expectations.

BLM recreation staff members meet periodically with upper Klamath River outfitters and guides and staff members of PacifiCorp, the utility company that operates the hydroelectric plants above and below the designated Wild & Scenic segment. In FY 2003, a preseason meeting was held to review how the season went for the outfitters and to discuss issues regarding timing, volume, and duration of water releases during the peak rafting season. The draft Upper Klamath River Plan was also discussed.

The BLM reviewed and provided comments to PacifiCorp's draft license application for the Klamath Hydroelectric Project (FERC #2082) for consistency with protection of the river's outstandingly remarkable values. Additional comments and protection/enhancement measures will be provided to PacifiCorp in their final license application.

**Findings:** Whitewater rafting is consistent with maintaining the Outstandingly Remarkable recreation Value on the upper Klamath Wild and Scenic river.

**Monitoring Question 2:**

- A) Are existing plans being revised to conform to Aquatic Conservation Strategy Objectives?
- B) Are revised plans being implemented?

**Findings:** A draft Upper Klamath River Management Plan/EIS was released for public comment in April 2003. The plan is being developed for the 15-mile portion of the Klamath River that is within the KFRA to conform with Aquatic Conservation Strategy Objectives. The final UKRMP/EIS will be completed in FY 2005.

**Monitoring Question 3:** Do actions and plans address maintenance or enhancement of the outstandingly remarkable values?

**Monitoring Requirements:** Annually, the files on all actions and research proposals within and adjacent to Wild and Scenic River corridors will be reviewed to determine whether the possibility of impacts on the Outstandingly Remarkable Values was considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether mitigation was actually implemented.

**Monitoring Performed:** No research proposals were reviewed in 2003. Projects implemented, prescribed fires in four previous oak thin/juniper removal areas and the Kerwin Ranch Meadow Restoration, were reviewed/monitored by KFRA staff.

**Findings:** Objectives for maintaining and enhancing ORV's were met in all project implementation.

## **Cultural Resources Including American Indian Values**

### **Expected Future Conditions and Outputs**

- Identification of cultural resource localities for public, scientific, and cultural heritage purposes.
- Consideration and protection of cultural resource values for future generations.

- Provision of information on long-term environmental change and past interactions between humans and the environment.
- Fulfillment of responsibilities to appropriate American Indian groups regarding heritage and religious concerns.

#### Implementation Monitoring

##### **Monitoring Question 1:**

Are cultural resources being addressed in deciding whether or not to go forward with forest management and other actions? During forest management and other actions that may disturb cultural resources, are steps taken to adequately mitigate disturbances?

**Monitoring Requirements:** At least 20 percent of the files on each year's timber sales and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding cultural resources and American Indian values in light of requirement, policy and NFP Record of Decision Standards and Guidelines, and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

**Monitoring Performed:** Review of existing survey data for Fuels management projects and in-field inspection of Indefinite-Delivery, Indefinite-Quantity (IDIQ) contract activity.

**Findings:** A review of existing data (Class I inventory) was conducted prior to implementation of the fire projects, then, the previously unsurveyed areas were 100% surveyed (Class III Inventory). It was found that 100% of the 15,354 acres of fuels projects were surveyed. Approximately 84 new prehistoric sites were recorded during survey activity.

In previously surveyed areas, an Archaeological Technician performed monitoring at the sites. Monitoring consisted of relocating sites, reestablishing flagging to outline site boundaries, and updating site location and site report forms. Once sites were relocated with a Global Positioning System, site location/boundaries were downloaded into a geographical information system (GIS) database. Because the sites would be avoided during project activity, a "no effect" determination was made in consultation with the State Historic Preservation Officer.

##### **Conclusion:**

Cultural resources were addressed in deciding whether or not to go forward with Fuels treatment projects

**Monitoring Question 2:** What mechanisms have been developed to describe past landscapes and the role of humans in shaping those landscapes?

**Findings:** No formal mechanisms were developed or employed during FY 2003 to describe past landscapes and the role of humans in shaping those landscapes. Site location data was collected during archaeological inventory and transferred into the geographic information system. This information will be used to analyze site location patterning with respect to current environmental variables and may prove useful for detecting human/environment interaction during the relatively recent past.

Professor Stephen Beckham from Lewis and Clark College has been contracted to write a historical landscape overview of the Klamath River Canyon. The overview will focus on the river canyon, but will also investigate historical developments within the region as they relate to the canyon. This research effort will be completed in early FY 2005.

**Conclusion:** Due to limited funding and Klamath Tribal concerns, no archaeological



excavations were conducted on lands administered by the Klamath Falls Field Office. Excavations often provide important data that can be used to interpret the roles humans have played in shaping past environments.

**Monitoring Question 3:** What efforts are being made to work with American Indian groups to accomplish cultural resource objectives and achieve goals outlined in existing memoranda of understanding and develop additional memoranda as needs arise?

**Findings:** The BLM consults with the Klamath Tribes on projects that could potentially impact cultural resources and Tribal values through a bimonthly meeting with the Klamath Tribes Culture and Heritage Department. Extensive consultation is conducted via presentations to the Tribal Council for projects of serious concern to the Klamath Tribes. A Draft Memorandum of Understanding (Agreement) was developed to foster increased communication between the Klamath Tribes and the BLM, but has yet to be signed by the Klamath Tribes.

**Monitoring Question 4:** What public education and interpretive programs were developed to promote appreciation of cultural resources?

**Findings:** Cultural resource specialists gave presentations during the Oregon Archaeology Month event, "Pedaling Through the Past"; a bicycle tour highlighting the history and management of the Klamath Falls Resource Area. During FY 2003, the Pedaling Through the Past event focused on the history and management of the Klamath River Canyon as seen along historic Topsy Road.

## Visual Resources

### Expected Future Conditions and Outputs

- Preservation or retention of the existing character of landscapes on BLM-administered lands allocated for Visual Resource Management Class I and II management; partial retention of the existing character on lands allocated for Visual Resource Management Class III management and major modification of the existing character of some lands allocated for Visual Resource Management Class IV management.
- Continuation of emphasis on management of scenic resources in selected high-use areas to retain or preserve scenic quality.

### Implementation Monitoring

**Monitoring Question 1:** Are visual resource design features and mitigation methods being followed during timber sales and other substantial actions in Visual Resource Management Class II, III, and IV areas?

**Monitoring Requirements:** Twenty percent of the files for timber sales and other substantial projects in Visual Resource Management Class II and III areas will be reviewed to ascertain whether relevant design features or mitigating measures were included.

**Monitoring Performed:** All fiscal year 2003 timber sales and other substantial projects.

**Findings:** The Upper Spencer Creek EA (OR-014-03-03) was reviewed in FY 2003. Within the project area, there are approximately 4,650 acres of BLM land in Visual Resource Management (VRM) class II, III, and IV areas. During the review of the EA, some additional project design features and mitigating measures were added to assist in maintaining visual class objectives.

The Kerwin Ranch Meadow Restoration EA (OR-014-03-01) was reviewed in 2003. There is approximately 1 acre of VRM class II BLM land in the project area. No additional project design features or mitigation measures were necessary for this restoration work.

The Gerber/Willow Valley Riparian Conifer Treatment DNA (DNA-014-03-12) was reviewed in 2003. In the areas proposed for treatment, approximately 160 acres are in VRM class II, 25 acres in VRM class III, and 1400 acres in VRM class IV. During the review of the DNA, some additional mitigation measures were identified to protect scenic resources along roads.

PacifiCorp's draft license application for the Klamath Hydroelectric Project (FERC #2082) was reviewed for consistency in protecting BLM lands within VRM class II and III areas. Preliminary proposed mitigation and enhancement measures have been identified to improve scenic quality and reduce visual impacts from the proposed project operations and existing facilities.

Several minor project actions for recreation were reviewed and additional mitigation or project design features to protect visual resources were incorporated as needed.

**Conclusion:** Visual resource design features and mitigation methods are being followed during forest health treatments planning and other substantial actions in Visual Resource Management Class II, III, and IV areas to ameliorate any adverse impacts from those projects on visual resources.

## **Rural Interface Areas**

### **Expected Future Conditions and Outputs**

- Consideration of the interests of adjacent landowners, including residents, during analysis, planning, and monitoring related to managed rural interface areas. These areas are defined as public lands within 1/4 mile of identified rural interface areas zoned for one to twenty acre lots. (These interests include personal health and safety, improvements to property and quality of life.)

## **Implementation Monitoring**

**Monitoring Question 1:** Are design features and mitigation measures developed and implemented to avoid/minimize impacts to health, life and property and quality of life and to minimize the possibility of conflicts between private and federal land management?

**Monitoring Requirements:** At least 20 percent of all actions within the identified rural interface areas will be examined to determine if special project design features and mitigation measures were included and implemented as planned.

**Monitoring Performed:** Monitoring the Bly Mountain timber sale near Klamath Forest Estates cannot be conducted until the sale is completed in FY 2004. No fuel reduction projects have been completed in the Harpold Dam or the Grenada Butte rural interface areas.

**Findings:** Monitoring of the Bly Mountain timber sale was completed in FY 2003. Prior to preparing the timber sale, adjacent landowners were contacted and requested to identify their concerns about the proposed sale. The primary concern expressed was how the timber stands would look after the trees were removed. A demonstration area inside an earlier burn was set up to show residents what trees would be removed and how the timber sale area would appear several years after the prescribed burn. Other concerns identified included: the unmerchantable material remaining after harvest for firewood should be made available for public use, and, the road maintenance association was concerned about potential damage occurring from timber hauling. The timber purchaser would be required to maintain the road.



**Conclusion:** Post treatment monitoring of the timber sale indicated that fuel reduction objectives were met. A combination of the commercial timber harvest and a follow-up fuel reduction treatment (thinning/handpiling) resulted in the reduced risk of stand replacing wild fire in these rural interface lands.

## Socioeconomic Conditions

### Expected Future Conditions and Outputs

- Contributions to local, state, national, and international economies through sustainable use of BLM-managed lands and resources and use of innovative contracting and other implementation strategies.
- Provision of amenities for the enhancement of communities as places to live and work.

### Implementation Monitoring

**Monitoring Question 1:** What strategies and programs have been developed, through coordination with state and local governments, to support local economies and enhance local communities?

**Findings:** Since 1991, the resource area has been participating in a unique partnership of government and private recreation and tourism providers: Klamath/Lake/Modoc/Siskiyou County Outdoor Recreation Working group. The group meets approximately every two months, sharing information on projects, and events, exploring new opportunities for partnerships and coordination, and promotion of local tourism. For FY 2003, the Lakeview District provided \$5,000 to support this organization. The Wood River Wetland continues to be a focus for cooperation and restoration efforts. The Upper Basin (Hatfield) Working Group, a citizen group commissioned by Senator Mark Hatfield continues to identify short and long-term restoration opportunities in the Klamath Basin and Northern California above Iron Gate Dam have identified and found funding sources for implementation of many restoration opportunities within the Klamath Basin.

The Klamath Falls Resource Area has coordinated with state and local governments in diverse activities such as recreation and timber sale planning, fish habitat inventory, water quality monitoring, hazardous material cleanup, air quality maintenance, wildfire suppression, road improvement, and recreation site developments.

**Monitoring Question 2:** Are RMP implementation strategies being identified that support local economies?

**Findings:** In 2003, the majority of the support for local economies came from fuel reduction and vegetation manipulation contracts that employed local people. The Resource Area spent approximately 4.6 million dollars on these contracts. The Jobs-in-the-Woods program monies (\$200,000) also were used for vegetation manipulation and fuel reduction with local organizations or contractors. Contractors were encouraged to hire local farmers to off set the financial impacts resulting from the drought. Recreation facilities in such areas including the upper Klamath River and several campgrounds (Gerber, and Topsy) received infrastructure enhancements to improve visitor experiences and meet user expectations. Additional enhancements such as construction of new trails, designated back county byways, interpretive displays, and brochures will be developed as funding allows.

**Monitoring Question 3:** What is the status of planning and developing amenities that enhance local communities, such as recreation and wildlife viewing facilities?

**Findings:** Reference Monitoring Question Findings in # 1 and 2 above, and in the sections addressing Recreation, Wildlife and the Wood River Wetland area accomplishments in this document.

## Recreation

### Expected Future Conditions and Outputs

- Provision of a wide range of developed and dispersed recreation opportunities that contribute to meeting projected recreation demand within the planning area.
- Provision of non-motorized recreational opportunities and creation of additional opportunities consistent with other management objectives.

### Implementation Monitoring

**Monitoring Question 1:** What is the status of the development and implementation of recreation plans?

**Findings:** The BLM completed the draft Upper Klamath River Management Plan/ Environmental Impact Statement (EIS) in April 2003. Recreation management (including proposed alternatives for non-motorized recreation opportunities) is a component of this river plan. A memorandum of understanding has been signed with the Oregon State Parks and Recreation Department on joint management of the Wild and Scenic River/State Scenic Waterway. A separate chapter of the river plan will address State Scenic Waterway issues.

Analysis of issues and projects has been completed for the Hamaker Mountain Special Recreation Management Area (SRMA), and has been started for the Stukel Mountain SRMA. No timeline for completing more comprehensive recreation plans for these areas is proposed.

Site-specific design and planning along with ongoing facility upgrades and renovations continue to be implemented through Recreation Pipeline Restoration Funds under the existing Klamath Falls RMP and Wood River Wetland RMP.

The Gerber/Willow Valley Watershed Analysis was completed in July 2003. The watershed analysis contains a discussion of existing recreation management and proposed changes or additions to recreation management in the Gerber area, since completion of the RMP/EIS in June 1995. Layout and design for the Miller Creek-Potholes non-motorized trail began in FY 2003. Construction of approximately 8 miles of trail is scheduled for 2005. The trail will link Gerber North and South campgrounds with Miller Creek and 3 primitive campsites.

## Forest Management and Timber Resources

### Expected Future Conditions and Outputs

- Provision of a sustained yield of timber and other forest products.
- Reduction of the risk of stand loss due to fires, animals, insects, and diseases.
- Provision of salvage harvest for timber killed or damaged by events such as wildfire, windstorms, insects, or disease, in a manner consistent with management objectives for other resources.
- Maintenance or restoration of healthy ecosystems while providing for the harvest of timber and other forest products in balance with other resource values and needs.



## Implementation Monitoring

**Monitoring Question 1:** By land-use allocation, how do timber sale volumes, harvested acres, and the age and type of regeneration harvest stands compare to the projections in the SEIS ROD Standards & Guidelines and RMP management objectives?

**Monitoring Performed:** Table M-4 is a summary by land use allocation of the timber volume and acreage that has been harvested in the KFRA since the signing of the RMP on June 2, 1995. The volume and acres are summarized by harvest method, land allocation, RMP/EIS Assumed Average, and Percent of Assumed average. All KFRA westside lands are in the Southern General Forest Management Area (SGFMA). All KFRA eastside lands are outside the boundaries of the Northwest Forest Plan.

**Findings:** There are some differences between actual treatments acres and the projected average. These are discussed in detail in the section near the beginning of this monitoring report.

**Monitoring Question 2:** Were the silvicultural (for example, planting with genetically selected stock, fertilization, release, and thinning) and forest health practices anticipated in the calculation of the expected sale quantity implemented?

**Monitoring Requirements:** An annual district wide report will be prepared to determine if the silvicultural and forest health practices identified and used in the calculation of the probable sale quantity were implemented. This report is summarized in this Annual Program Summary.

**Findings:** Completed silvicultural treatments are shown in Table 2.1 and Table 19.10 of the 2003 Annual Program Summary. Calculation of the ASQ was based on successful planting of regeneration units and normal stand development unimpeded by excessive vegetative competition or animal damage, and also taking into consideration precommercial thinning when needed. (Yield gains were not assumed for planting genetically selected trees, fertilization, or pruning.)

All timber sale silvicultural prescriptions and watershed analyses considered forest health practices. In each prescription, retention and maintenance of underrepresented species was emphasized to help increase the pine species composition in stands where historically, the composition of pine was higher. These are generally located in the mixed conifer forest types in the Spencer Creek and Jenny Creek drainages. Even in the mortality salvage sales, some thinning is done around the larger old growth for enhancement purposes. Elevated fuel level concerns were primarily addressed in the density management sale prescriptions. All prescriptions are designed to leave harvested stands with reduced fuel loads, with a lower risk for a stand replacing fire, and in a condition where post-project underburns could be implemented in the stand.

**Conclusion:** Silvicultural and forest health practices were anticipated and are being implemented. The excess mortality that has occurred was not anticipated and as a result, a modification in treatment prescriptions has been necessary to harvest the on-going mortality.

## Special Forest/Natural Products

### Expected Future Conditions and Outputs

- Production and sale of special forest/natural products when demand is present and where actions taken are consistent with primary objectives for the land use allocation.
- Utilization of the principles of ecosystem management to guide the management and harvest of special forest products.

## Implementation Monitoring

**Monitoring Question 1:** Is the sustainability and protection of special forest/natural product resources ensured prior to selling special forest products?

**Findings:** To date, sustainability of special forest products has not been an issue because the demand has been primarily on special/natural products, which can be readily found. Permits have been issued for wood products including; firewood, sawlogs, posts, and poles. Additional special forest products that have been sold include; juniper boughs, Christmas trees, mushrooms, greenery, lichen, cones, and transplants. The only permit request denied to date has been the cutting of incense cedar boughs. The denial was due to the on-going mortality of incense cedar in many stands south of Highway 66. When selling lichens, bryophytes, and certain fungi, resource specialist are consulted prior to issuing any unique permits.

With the recent shortage of power concerns throughout the west, there are some on-going discussions and plans for additional small cogeneration power plants that would be fueled by biomass. The KFRA has two potential sources of biomass that could be utilized for fuel. One source would be western juniper trees that have encroached on thousands of acres of rangeland. Another source would be residual slash as a result of various treatments including; logging operations, precommercial thinning, hazardous fuel reduction treatments for fire, and watershed restoration and wildlife projects that involve juniper cutting. The KFRA analyzed treating up to 1,000 acres per year of western juniper in the RMP in addition to range allotment improvements where juniper cutting was also analyzed. The capability of providing western juniper on a sustained basis for power plants, and to meet the needs of the public for personal use as well, may eventually need to be addressed.

**Conclusion:** At the present time, based on the different resource evaluations completed thus far, and permits issued to date, sustainability of Special Forest Products is not threatened.

**Monitoring Question 2:** What is the status of the development and implementation of specific guidelines for the management of individual special forest/natural products?

**Findings:** The Klamath Falls Resource Area received from the Oregon State Office an updated Handbook 5400-2 addressing Special Forest Products in June of 1995. In addition, the Klamath Falls Resource Area individually develops specific harvesting guidelines for products to ensure sustainability and permit compliance. For example, for bough harvest, permit holders are required to follow specific guidelines to assure survival of the tree from which the boughs are removed. In addition, specific guidelines are written for harvesting mushrooms to ensure sustainability. Although most small sales permits generally result in minimal resource impacts, specifications are included in the permits that addresses weather, roads, fire risk, sustainability, cultural, and other resource concerns. In FY 2003, the KFRA updated the District Special Forest Product Handbook and included a number of new collection requirements.

The Klamath Falls Resource Area initiated a number of pre treatment monitoring plots in juniper treatment areas in FY 2001 and FY 2002. These plots are designed to monitor vegetation response from juniper cutting and in some cases removal. In addition, the plots are designed to monitor soil impacts from the different equipment used to cut and remove the juniper. A post treatment qualitative review was completed by a number of specialists in the fall of 2001. A summary of the results of that review is available on request.

**Conclusion:** Based on field experience, and the small number of permits issued for products, sustainability of Special Forest Products in the immediate future is assured.



## Wildfire / Fuels Management

### Expected Future Conditions and Outputs

- Provision of the appropriate suppression responses to wildfires in order to meet resource management objectives and minimize the risk of large-scale, high intensity wildfires.
- Utilization of prescribed fire to meet resource management objectives. (This will include, but not be limited to, fuels management for wildfire hazard reduction, restoration or desired vegetation conditions, management of habitat, and silvicultural treatments.)
- Adherence to smoke management/air quality standards of the Clean Air Act and State Implementation Plan standards for prescribed burning.

### Implementation Monitoring

**Monitoring Question 1:** Have analysis and planning been completed to allow some natural fires to burn under prescribed conditions?

**Findings:** No analysis and planning were completed for FY 2003 natural fires. BLM managers have not completed adequate planning or analysis to allow natural fires to burn under certain prescribed conditions.

**Monitoring Question 2:** Do wildfire suppression plans emphasize maintaining late-successional habitat?

**Findings:** Wildfire Situation Analyses will be prepared for all wildfire and suppression actions that escape initial attack.

**Conclusions:** In FY 2003, four fires occurred. Three were operations fires and the other was from lightning. The total burned area of all fires was a little over three acres.

**Monitoring Question 3:** Are Wildfire Situation Analyses being prepared for wildfires that escape initial attack?

**Findings:** Wildfire suppression plans include protecting multiple resources including Late-Successional habitat. The plans and assessments for late-successional reserves address this issue.

**Monitoring Question 4:** What is the status of interdisciplinary team preparation and implementation of fuel hazard reduction plans?

**Findings:** Fuels and Fire Management Plans continue to be developed. Analysis is being done in conjunction with a late-successional reserve assessment that is being completed by the interdisciplinary team. These LSR assessments will contain recommendations for each LSR as to fuel treatments. Some LSRs will require extensive actions, while others will receive no treatments at the present time.

## Rangeland Resources / Grazing Management

### Expected Future Conditions and Outputs

- The livestock and wild horse grazing programs will be managed under the principles of multiple use and sustained yield. Monitor the existing grazing allotments and the wild horse herd management area in compliance with the established "Coordinated

Monitoring and Evaluation Plan for Grazing Allotments” for the Klamath Falls Resource Area.

- Monitoring data will be the foundation to support adjustments in the management of grazing use by livestock and wild horses. Evaluation of the monitoring data, in relation to the identified allotment objectives in this Proposed Resource Management Plan as well as future standards and guidelines, will be completed through a team of interdisciplinary resource specialists, with public review as appropriate.

## Implementation Monitoring

**Monitoring Question 1:** Are allotments and herd management area goals and objectives being achieved with current management as specified on an allotment specific basis?

**Monitoring Performed:** Rangeland monitoring studies have been completed during FY 1995-2002 in accordance with KFRA’s *Coordinated Monitoring and Evaluation Plan for Grazing Allotments*. This directs the most monitoring emphasis on high priority (management category “I”) allotments, including the two allotments (Dixie and Edge Creek), which constitute the Pokegama HMA. Of particular importance are the three allotments in the Gerber Block – Horsefly, Dry Prairie, and Pitchlog - that are under ESA Section 7 consultation.

Studies include various rangeland condition, trend, and utilization studies; riparian classification, condition, and photo trend studies; actual grazing use supervision and information; Ecological Site Inventory, or ESI (though not monitoring per se, this survey does help support and direct the other rangeland monitoring); and other rangeland monitoring studies as needed. On low priority allotments (virtually all of the “C” category allotments) monitoring is done on an as needed basis depending on problems or concerns that arise at some given point in time. Typically this is some situational, short term grazing administration problem that occurs on an allotment, needs some type of management attention to solve, the effects of which need monitored (usually use supervision) to ensure that the problem was properly and adequately addressed. As noted previously under the grazing section, ESI is being commenced for most of the “C” category allotments in order to have ecologically based vegetation information to assist in the preparation of upcoming Rangeland Health Standards Assessments.

The Pokegama HMA has been aerial and/or ground censused every year since completion of the KFRA ROD/RMP. In 2002 (no census in 2003) the current herd population level was estimated to be between 30-35 head, based on an aerial census (February 2002) supplemented by numerous ground observations. The herd is still believed to number between 30-35 head.

**Findings:** Rangeland monitoring studies established, read, and reread over the past 12 grazing seasons (FY 1992-2003 inclusive) have found that grazing use on priority allotments is within land use planning and other pertinent resource objective levels and requirements. Priority allotments include the 14 “I” category, 4 “M” category, and 1 “C” category allotments (allotment categorization is explained in the KFRA ROD/RMP - pages H-69-70). The combined acreage of these priority allotments comprises 60% of the KFRA grazing land base. Yearly priorities also include a number of “C” allotments that need attention based on a variety of grazing administration problems or issues. Recent watershed analysis efforts, allotment evaluations, and Rangeland Health Standards Assessments have supported the above finding. However, the amount of information collected is more than can be summarized in this APS; this information and the various evaluations and assessments are available at the KFRA.

For the Pokegama HMA, the herd was found to be above the determined Appropriate Management Level (AML) of 30 to 50 head in 1996 and 2000. (The AML was established based on properly evaluated rangeland monitoring studies performed over time that have



determined the current number is appropriate to a self-sustaining population of healthy animals in balance with other uses and the productive capacity of their habitat.) Because the AML was exceeded, wild horse removals were necessary to get back to AML. This was accomplished by bait-trapping performed by Resource Area personnel during the spring/summer/fall of 1996 and again in May/June 2000. Twenty horses (in 1996) and 18 horses (in 2000) were removed from the HMA and transported to the wild horse corrals in Burns, Oregon for adoption via the Bureau's Adopt-a-Horse program. No removals have been done since 2000. Based on the currently slow growth rate of the herd, it is not expected that any removals will be necessary until later in the decade.

**Conclusion:** The answer to this monitoring question is "generally yes", on a priority allotment basis. This means that allotments in the "I" and "M" categories, those that are identified for livestock use reductions in the RMP, are under ESA Section 7 consultation, contain important perennial streams, and/or have other critical resource issues, are receiving the most attention and management action and are at, or moving significantly towards, meeting Land Use Plan (LUP) objectives. The Pokegama HMA is also meeting LUP objectives and goals by being within AML and having at least adequate habitat available. Lower priority "C" allotments are generally also meeting the minimal objectives set for these areas. The currently ongoing process of assessing all allotments (including low priority "C" category ones) to ensure the meeting of the Standards for Rangeland Health will determine if allotments are meeting resource objectives, and if not, management will be adjusted to ensure the future meeting of objectives. This process, which began in 1999, is scheduled to extend through 2010.

**Monitoring Question 2:** Are the appropriate standards and guidelines, applicable to livestock and wild horse grazing, being correctly applied and followed?

**Findings:** See response to #1 above.

**Monitoring Question 3:** Are rangeland improvement projects consistent with meeting the objectives of all resources addressed in this Resource Management Plan as well as the Aquatic Conservation Strategy and Late-Successional/District Designated Reserve objectives?

**Monitoring Performed:** Monitoring of rangeland improvements is done in conjunction with normal grazing use supervision and rangeland monitoring field visits to grazing allotments. This monitoring is typically to determine if a given rangeland improvement is functioning as it should, i.e. fence is intact, spring is flowing, etc. If not, the project is repaired or reconstructed by the BLM (typically maintenance of riparian projects), or the grazing user is notified and required to fix the problem if the project is their maintenance responsibility (grazing regulations at 43 CFR 4100). An estimated 20-25 grazing improvement projects are checked annually, with 5-10 repaired by BLM personnel. Many more are inspected and repaired grazing permittees and lessees.

**Findings:** No existing rangeland improvements are known to conflict with the objectives stated in this monitoring question.

**Conclusion:** All rangeland projects (new or existing) are believed to be consistent with the meeting of the listed LUP objectives. If projects are found in the future that are inconsistent, they will be altered or removed. All future proposed projects would be reviewed to ensure consistency.







## **GLOSSARY / ACRONYMS**





## GLOSSARY / ACRONYMS

**Allowable Sale Quantity (ASQ)** - An estimate of annual average timber sale volume that can be harvested from lands allocated to be planned, sustainable harvest. ASQ is used interchangeably with PSQ in this Annual Program Summary to avoid confusion related to technical differences in their definitions.

**Alternate Dispute Resolution (ADR)** - Given the complexity of the Adjudication and other water allocations issues in the Klamath Basin, the Oregon Water Resources Department (OWRD) has initiated a voluntary alternative dispute resolution (ADR) process to provide a forum to address adjudication claim issues and other matters related to water supply and demand in the Klamath Basin.

**Appropriate Management Level (AML)** - The optimum number of wild horses (or burros) within a Herd Management Area (HMA) that results in a thriving ecological balance and avoids a deterioration of the range. Numbers above the AML are considered "excess" and must be removed.

**Animal Unit Month (AUM)** - Amount of forage required to sustain one cow and calf, or one horse, or five sheep, for one month.

**Annual Program Summary (APS)** - A review of the programs on a district or resource area for a specific time period, usually a fiscal year (FY).

**Aquatic Conservation Strategy (ACS)** - A strategy developed to restore and maintain the ecological health of watersheds and aquatic ecosystems within the planning area addressed by the Northwest Forest Plan.

**Areal extent** - In soil monitoring, a quantifiable measurement that is a comparison of pretreatment undisturbed project area and post treatment project disturbance area. Further defined as area of detrimental conditions: leave a minimum of 80% of area (including permanent transportation system) in an acceptable productivity potential for trees and other managed vegetation.

**Archaeological Site** - A geographic locale that contains the material remains of prehistoric and/or historic human activity.

**Archaeological Resource Protection Act (ARPA)** (P.L. 96\_95; 93 Stat. 721; 16 U.S.C. 470aa et seq.) as amended (P.L. 100\_555; P.L. 100\_588) - provides felony-level penalties, more severe than those of the Antiquities Act of 1906 (see .03A), for the unauthorized excavation, removal, damage, alteration, defacement, or the attempted unauthorized removal, damage, alteration, or defacement of any archaeological resource, more than 100 years of age, found on public lands or Indian lands. The act also prohibits the sale, purchase, exchange, transportation, receipt, or offering of any archaeological resource obtained from public lands or Indian lands in violation of any provision, rule, regulation, ordinance, or permit under the act, or under any Federal, State, or local law. No distinction is made regarding National Register eligibility. The act establishes definitions; permit requirements, and criminal and civil penalties, among other provisions, to correct legal gaps and deficiencies in the Antiquities Act (see .03A). The act overlaps with and partially supersedes the Antiquities Act.

**Area of Critical Environmental Concern (ACEC)** - An area of BLM administered lands where special management attention is needed to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources, or other natural systems or processes; or to protect life and provide safety from natural hazards.

**Best Management Practices (BMP)** - Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

**Biological Diversity** - The variety of life and its processes, including a complexity of species, communities, gene pools, and ecological function.



**Biological Opinion (BO)** - A determination reached for endangered fish or wildlife species that is issued by the USFWS through consultation with another agency. This opinion evaluates the potential impacts to a species from a specific project and provides recommendations for protection of the viability of the species.

**Board Foot** - A unit of solid wood, one-foot square and one inch thick.

**Bulk Density** - Soil bulk density is the ratio of mass to volume for a given sample of soil and is commonly used as a measure of the compaction of a given soil. The higher the bulk density value, the more compact a soil is. Bulk density is expressed in grams/cubic centimeter (g/cm<sup>3</sup>). Water at room temperature (25 degrees C.) and 1 atmospheric pressure has a bulk density of 1.0 g/cm<sup>3</sup>.

**Bureau Assessment Species** – (Refer to “Special Status Species”)

**Bureau of Land Management (BLM)** - Agency within the Department of the Interior charged with management of the public lands.

**Bureau Sensitive Species** - (Refer to “Special Status Species”)

**Candidate Species** - (Refer to “Special Status Species”)

**Categorical Exclusion (CX)** - A categorical exclusion is used when it has been determined that some types of proposed activities do not individually or cumulatively have significant environmental effects and may be exempt from requirements to prepare an environmental analysis. Categorical exclusions (CX) are covered specifically by Department of Interior and BLM guidelines.

**Cavity Nesters** - Wildlife species, most frequently birds, that require cavities (holes) in trees for nesting and reproduction.

**Clean Water Act (CWA)** - the Clean Water Act is the primary Federal statute governing the restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters.

**Coarse Woody Debris (CWD)** - Woody pieces of trees that have been detached from their original source of growth (dead trees that are not self-supporting shall be considered severed). This includes uprooted trees and any severed stems or branches attached to them. It does not include: live trees, dead limbs or branches attached to a dead tree, stumps, dead foliage, bark, or designated shrub species.

**Coordinated Resource Management Plan (CRMP)** - A resource management plan covering a specific geographical area, typically with a mixed land ownership pattern, that coordinates with all interested land owners and affected government agencies to manage for a wide array of resources and resource concerns. This process emphasizes mutually agreed upon goals and a cooperative, instead of confrontational, approach.

**Council on Environmental Quality (CEQ)** - Government agency with oversight of the implementation of the National Environmental Policy Act (NEPA).

**Cubic Foot (CF)** - A unit of solid wood, one foot square and one foot thick.

**Cultural Resource** - objects, sites and information of historic, prehistoric, archeological, architectural, paleontological or traditional significance.

**Cumulative Effect** - The impact that results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

**Density Management (DM)** - Cutting of trees for the primary purpose of widening their spacing so that growth of remaining trees can be accelerated. Density management harvest can also be used to improve forest health, to open the forest canopy, or to accelerate the attainment of old growth characteristics.

**Department of Environmental Quality (DEQ)** - A department of Oregon State government with responsibilities to oversee the state's environmental laws.

**Diameter at Breast Height (DBH)** - The diameter of a tree 4.5 feet above the ground on the uphill side of the tree.

**District Designated Reserves (DDR)** - Areas designated for the protection of specific resources, flora and fauna, and other values. These areas are not included in other land use allocations nor in the calculation of the PSQ.

**Ecological Site Inventory** - BLM's rangeland survey method has four seral stages based on similarity to the perceived Potential Natural Community. Those stages are Early Seral, Mid Seral, Late Seral and Potential Natural Community.

**Ecosystem Restoration Office (ERO)** - The ERO is an interagency office which is operated cooperatively by the U.S. Fish and Wildlife Service, Bureau of Reclamation, U.S. Forest Service and the BLM. This interagency office provides funding, technical assistance, and monitoring for watershed restoration projects which are proposed by the Upper Klamath Basin Working Group. This group works closely with the Klamath Basin Provincial Advisory Committee and watershed councils within the Klamath Basin.

**EIS Special Attention Species** - A term that incorporates the "Survey and Manage" and "Protection Buffer" species from the Northwest Forest Plan.

**Eligible River** - A river or river segment found, through interdisciplinary team and, in some cases, interagency review, to meet Wild and Scenic River Act criteria of being free flowing and possessing one or more Outstandingly Remarkable Values.

**Endangered Species** - (Refer to "Special Status Species")

**Endangered Species Act** - Act created in 1973 that identified a National List (administered by the USFWS) of any plant, animal, or fish that is in danger of extinction throughout all or a significant portion of its range. Prior to implementation of projects, a consultation process with USFWS is required for species that have threatened, proposed, and candidate status.

**Environmental Assessment (EA)** - A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment; and whether a formal Environmental Impact Statement is required; and to aid an agency's compliance with NEPA when no EIS is necessary.

**Environmental Education Area** - Area used to inform and educate the public on topics relating to the environment(s) found within the KFRA.

**Environmental Impact Statement (EIS)** - Type of document prepared by Federal agencies in compliance with the National Environmental Policy Act (NEPA) that identifies the environmental consequences of proposed major Federal actions expected to have significant impacts on the human environment.

**Federal Energy and Regulatory Commission (FERC)** - Government agency with responsibility for issuing permits and license for power projects.

**Fiscal Year (FY)** - Budgeting year for the BLM from October 1 through September 30 each year.

**Geographic Information System (GIS)** - Computer Database of resource information.

**Global Positioning System (GPS)** - Satellite technology used to locate a specific point on the ground.

**Green Tree Retention (GTR)** - Within the KFRA, a term for leaving green trees in a stand when planning a regeneration cut timber sale. Typically, between 16-25 trees per acre, will be retained in the stand.

**Hazardous Materials** - Anything that poses a substantive present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.



## *Klamath Falls Resource Area*

**Herd Management Area (HMA)** - Public land under the jurisdiction of the Bureau of Land Management that has been designated for special management emphasizing the maintenance of an established wild horse herd. HMAs are defined by the "Wild Free-Roaming Horse and Burro Act" of 1971.

**Interdisciplinary Team (IDT)** - A team of resource specialists organized by agencies to prepare environmental documents.

**Integrated Weed Control Plan (IWCP)** - The plan and programmatic EA for noxious weed management within the KFRA approved in 1993.

**Intermountain West Joint Venture (IWJV)** - The IWJV was formed in 1995 and covers eastern Oregon and parts of nine other western states. This group meets quarterly and is in the process of writing an area plan to determine conditions of wetlands and identify opportunities to improve wetland habitat. The plan (in development) will focus on the Klamath Basin eco-region. This plan, as well as other eco-regions plan within the ten western states, is following the guidelines outlined under the North American Wetlands Conservation Act of 1989. The representatives for the Klamath Basin eco-region are BLM, Ducks Unlimited, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Modoc National Forest, California Fish and Game, and Oregon Joint Venture. The plan is expected to be completed within two years.

**Klamath Falls Resource Area (KFRA)** - That portion of the BLM/Lakeview District located in the south end of Klamath County.

**Land Use Allocation (LUA)** - Allocations that define uses and or activities that are allowable, restricted, and prohibited. They may be expressed in terms of area such as acres or miles. Each allocation is associated with a specific management objective.

**Late-Successional Reserves (LSR)** - Lands managed to maintain and restore old-growth forest conditions.

**Matrix Lands** - Federal land outside of reserves and special management areas that will be available for timber harvest at varying levels.

**Memorandum of Understanding (MOU)** - A document between agencies or sovereign nations, such as an Indian tribe, that discloses the protocol for how each party will coordinate and consult with each other relative to a particular activity or activities.

**Million Board Feet (MMBF)** - An expression of volume of trees harvested from timber sales, in millions of board feet.

**Monitoring and Evaluation** - Collection and analysis of data to evaluate the progress and effectiveness of on-the-ground actions in meeting resource management goals and objectives.

**Mortality Salvage** - Timber sales designed to utilize mortality (dead and /or dying trees). This primarily involves only the removal of the mortality within the stand. Normally, less than 10% of the volume removed is live trees in the mortality salvage sales.

**National Environmental Policy Act of 1969 (NEPA)** - Law requiring all federal agencies to evaluate the impacts of proposed major Federal actions with respect to their significance on the human environment.

**National Historic Preservation Act (NHPA)** - An act to establish a program for the preservation of additional historic properties throughout the nation, and for other purposes. This act extends the policy in the Historic Sites Act to include State and local as well as national significance, expands the National Register of Historic Places, and establishes the Advisory Council on Historic Preservation, State Historic Preservation Officers, and a preservation grants-in-aid program.

**Natural Resource Conservation Service (NRCS)** - A Federal agency that helps private landowners correct resource problems occurring on their land.

**Northwest Forest Plan (NFP)** - The plan for management of Forest Service and Bureau of Land Management late-successional and old-growth forest lands within the range of the northern spotted owl.

**Noxious Plant/Weed** - A plant designated by the U.S. Department of Agriculture, or state or local weed board, as being injurious to public health, recreation, wildlife, or any public or private property.

**O&C Lands (O&C)** - Public lands granted to the Oregon and California Railroad Company, and subsequently re-vested to the United States, that are managed by the Bureau of Land Management and Forest Service under the authority of the O&C Lands Act.

**Offered (sold) Volume or Offered (sold) Acres** - Any timber sold during the year by auction or negotiated sales, including modifications to contracts. It should be noted that for this Annual Program Summary, offered is considered the same as sold.

**Off-Highway Vehicle (OHV)** - Any motorized track or wheeled vehicle designed for cross-country travel over natural terrain. The term, "Off Highway Vehicle" will be used in place of the term "Off Road Vehicle" to comply with the purposes of Executive orders 11644 and 11989. The definition for both terms is the same.

**Open** - Designated areas and trails where Off Highway Vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343.

**Limited** - Designated areas and trails where Off Highway Vehicles are subject to restrictions limiting the number or types of vehicles, date, and time of use; limited to existing or designated roads and trails.

**Closed** - Areas and trails where the use of Off Highway Vehicles is permanently or temporarily prohibited. Emergency use is allowed.

**Oregon Department of Agriculture (ODA)** - A branch of Oregon State Government with responsibilities for agricultural activities, noxious weed management, and native plant conservation.

**Oregon Department of Environmental Quality (ODEQ)** - A department of Oregon State government with responsibilities to oversee the state's environmental laws.

**Oregon Department of Fish and Wildlife (ODFW)** - A branch of Oregon State Government with responsibilities for managing wildlife populations on federal and state lands.

**Outstanding Natural Area (ONA)** - An area that contains unusual natural characteristics and is managed primarily for educational and recreational purposes.

**Outstandingly Remarkable Values (ORV)** - Values among those listed in Section 1 (b) of the Wild and Scenic Rivers Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values...". Other similar values that may be considered include ecological, biological or botanical, paleontological, hydrological, scientific, or research.

**Payment in Lieu of Taxes (PILT)** - Federal payments to local governments to offset losses in property taxes due to nontaxable Federal lands within their boundaries. BLM is responsible for calculating the payments according to formulas established by law and distributing the funds appropriated by Congress.

**Pre-commercial Thinning (PCT)** - The practice of removing some of the trees less than merchantable size from a stand so that remaining trees will grow faster.

**Prescribed Fire** - A fire burning under specified conditions and designed to accomplish definite, define objectives.

**Probable Sale Quantity (PSQ)** - An estimated average annual volume that can be harvested from lands allocated to planned, sustainable harvest. PSQ is used interchangeably with ASQ in this Annual Program Summary to avoid confusion related to technical differences in their definitions.



**Projected Acres** - These “modeled” age class acres are estimates derived from modeling various silvicultural prescriptions for regeneration, commercial thinning and density management harvest. Modeled age class acre projections may or may not correspond to “Offered” or “Harvested” age class acres at a given point in the decade. Additional age classes are scheduled for regeneration, commercial thinning and density management harvest at other points in the decade.

**Protection Buffer Species** - Species designated in the Northwest Forest Plan that provides for specific management of known sites for these species, and, in many cases, requires surveys prior to ground disturbing activities.

**Rangeland Program Summary (RPS)** - A BLM planning document typically completed in conjunction with an RMP Record of Decision that lays out the specifics for grazing management by grazing allotment. This includes allotment specific resource objectives, level and season of use, allotment categorization, wildlife allocations, and other information relevant to a give allotment.

**Resource Apprentice Program for Students (RAPS)** - A work experience program for high school students intended to give the students actual experiences in natural resource management.

**Regeneration Harvest** - Timber harvest with the objective of opening a forest stand enough to regenerate desired tree species.

**Regional Ecosystem Office (REO)** - Office established to provide staff work and support to the Regional Interagency Executive Committee (RIEC) so the standards and guidelines in the Northwest Forest Plan can be successfully implemented.

**Regional Interagency Executive Committee (RIEC)** - This group serves as the senior regional entity to assure the prompt, coordinated, and successful implementation of the forest management plan standards and guidelines at the regional level.

**Research Natural Area (RNA)** - An area that contains natural resource values of scientific interest and is managed primarily for research and educational purposes. Each RNA is also an Area of Critical Environmental Concern (ACEC).

**Resources and People (RAP) Camp** - This camp is designed to inform students (ages 15-18) and educators about natural resource management and careers working with natural resources.

**Resource Management Plan (RMP)** - A land use plan prepared by the BLM under current regulations in accordance with the Federal land Policy and Management Act.

**Right-of-Way (ROW)** - A permit or easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs, and the lands covered by such an easement or permit.

**Riparian Reserve (RR)** - Riparian Reserves are portions of watersheds where riparian-dependent resources receive primary emphasis and where special standards and guidelines apply. Riparian Reserves occur at the margins of standing and flowing water, intermittent stream channels and ephemeral ponds, and wetlands.

**Rural Interface Areas (RIA)** - Areas where BLM administered lands are adjacent to or intermingled with privately owned lands zoned for 1 to 20-acre lots or that already have residential development.

**Seral Stages** (Eastside rangeland communities) - The series of relatively transitory plant communities that develop during ecological succession from a community with no native plants (or possibly bare ground) to the potential natural community (PNC or climax) stage. There are four levels recognized by the Ecological Site Inventory, each of which is defined as the present state of vegetation on an ecological site in relation to the historic climax plant community for the site. The four stages are defined (for our area) as follows:

**Early Seral** – A plant community that exhibits 0-25% similarity to the historic climax plant community. Often these communities are dominated by exotic annual plant species or native species that are not typically

found on the site (e.g. western juniper dominated sites that should not have much juniper). Site typical plant species are sparse to (rarely) absent.

**Mid Seral** - A plant community that exhibits 26-50% similarity to the historic climax plant community. These sites may or may not have functional plant communities, typically have a distinct overabundance of shrubs and/or juniper, have significant amounts of exotic annuals, and typically, have less half of the climax quantity of perennial native grasses.

**Late Seral** - A plant community that exhibits 51-75% similarity to the historic climax plant community. These communities are often very functional and stable, but may have a slight overabundance of shrubs or tree species, an slight to moderate under-abundance of native perennial grasses, and have some quantity of non-site typical plants species. Exotic annuals are sparse, though often present in small to insignificant quantities.

**Potential Natural Community (PNC)** - A plant community that has 76-100% of the historic climax plant community present. These are typically the most ecologically functional - and often stable - plant community that can exist on a site. Exotic annuals are rare to nonexistent.

**Seral Stages** (Westside forest communities) - The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage. There are five stages recognized in forest succession:

**Early Seral Stage** - The period from disturbance to crown closure of conifer stands usually occurring from 0-15 years. Grass, herbs, or brush are plentiful.

**Mid Seral Stage** - The period in the life of a forest stand from crown closure to ages 15-40. Due to stand density, brush, grass, or herbs rapidly decrease in the stand. Hiding cover for wildlife may be produced.

**Late Seral Stage** - The period in the life of a forest stand from first merchantability to culmination of Mean Annual increment. This is under a regime including commercial thinning, or to about 100 years of age, depending on wildlife habitat needs. During this period, stand diversity is minimal, except that conifer mortality rates will be fairly rapid. Hiding and thermal cover may be present. Forage is minimal.

**Mature Seral Stage** - The period in the life of a forest stand from Culmination of Mean Annual Increment to an old growth stage of about 200 years. This is a time of gradually increasing stand diversity. Hiding cover, thermal cover, and some forage may be present.

**Old Growth** - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbances the forest structure will be more even-aged at late mature or early old growth stages.

**Silvicultural Prescription** - A professional plan for controlling the establishment, composition, constitution, and growth of forests.

**Site Preparation** - Any action taken in conjunction with a reforestation effort (natural or artificial) to create an environment that is favorable for survival of suitable trees during the first growing season. This condition can be created by altering ground cover, soil or microsite conditions, using biological, mechanical, or manual clearing, prescribed burns, or a combination of methods.

**Southern General Forest Management Area (SGFMA)** (See Matrix) - Forest land managed on a regeneration harvest cycle of 60-110 years. All Matrix lands south of Grants Pass, Oregon are designated as SGFMA.

**Special Recreation Management Area (SRMA)** - Area having commitment to provide specific recreation activity and experience opportunities. These areas usually require high level of recreation investment and/or management. Include, but not limited to, recreation sites.



**Special Status Species** - Plant or animal species falling into any one of the following Federal, State, or BLM status categories:

**FEDERAL STATUS (USFWS)**

**Endangered** – Any species defined through the Endangered Species Act as being in danger of becoming extinct within the foreseeable future throughout all or a significant portion of their range. Listings are published in the Federal Register.

**Threatened** - Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Listings are published in the Federal Register.

**Listed Endangered (LE)** - Taxa listed by the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) as Endangered under the Endangered Species Act (ESA), or by the Departments of Agriculture (ODA) and Fish and Wildlife (ODFW) of the state of Oregon under the Oregon Endangered Species Act of 1987 (OESA).

**Listed Threatened (LT)** - Taxa listed by the USFWS, NMFS, ODA, or ODFW as Threatened.

**Proposed Endangered (PE)** - Taxa proposed by the USFWS or NMFS to be listed as Endangered under the ESA or by ODFW or ODA under the OESA.

**Proposed Threatened (PT)** - Taxa proposed by the USFWS or NMFS to be listed as Threatened under the ESA or by ODFW or ODA under the OESA.

**Candidate (C)** - Taxa for which NMFS or USFWS have sufficient information to support a proposal to list under the ESA, or which is a candidate for listing by the ODA under the OESA. There are two categories of primary concern to BLM:

**Category 1** - Taxa for which the USFWS has substantial information on hand to support proposing the species for listing as threatened or endangered. Listing proposals are either being prepared or have been delayed by higher priority listing work.

**Category 2** - Taxa for which the USFWS has information to indicate that listing is possibly appropriate. Additional information is being collected.

**Species of Concern (SoC)** - Former C2 candidates which need additional information in order to propose as Threatened or Endangered under the ESA. These are species which USFWS is reviewing for consideration as Candidates for listing under the ESA.

**BUREAU STATUS (BLM)**

**Bureau Sensitive (BS)** - According to the definition in the Bureau 6840 policy, BS designation includes species that could easily become endangered or extinct in a state. They are restricted in range and have natural or human-caused threats to survival. BS species are not FE, FT, FPE, FPT, FC, SE, or ST, but are eligible for federal or state listing or candidate status. BS species are designated by the State Director and are tiered to the state fish/wildlife/botanical agencies' or ONHP designations. BS species that are Oregon state Critical - animals and Candidates - plants, Washington state Sensitive - animals and Threatened and Endangered - plants, or ONHP List 1 are considered BS species.

**Bureau Assessment (BA)** - Bureau Assessment is category that pertains to OR/WA BLM only per the OR/WA BLM 6840 policy. Plant and wildlife species which are not presently eligible for official federal or state status but are of concern in Oregon or Washington may, at a minimum, need protection or mitigation in BLM activities. These species will be considered as a level of special status species separate from BS, and are referred to as BA species.

**Bureau Tracking (BT)** - Bureau Tracking is a status that pertains to OR/WA BLM only per the BLM OR/WA 6840 policy. To enable an early warning for species which may become of concern in the future, districts are encouraged to collect occurrence data on species for which more information is needed to determine status within the state or which no longer need active management. Until status of such species changes to federal or state listed or proposed, FC, BS or BA species, BT will not be considered as special status species for management purposes.

#### **STATE STATUS (ODFW)**

**Critical (SC)** - Species for which listing as threatened or endangered is pending; or those for which listing as threatened or endangered may be appropriate if immediate conservation actions are not taken. Also considered critical are some peripheral species which are at risk throughout their range, and some disjunct populations.

**Vulnerable (SV)** - Species for which listing as threatened or endangered is not believed to be imminent and can be avoided through continued or expanded use of adequate protective measures and monitoring. In some cases the population is sustainable, and protective measures are being implemented; in others, the population may be declining and improved protective measures are needed to maintain sustainable populations over time.

**Peripheral or Naturally Rare (SP)** -Peripheral species refer to those whose Oregon populations are on the edge of their range. Naturally rare species are those which had low population numbers historically in Oregon because of naturally limiting factors. Maintaining the status quo for the habitats and populations of these species is a minimum requirement. Disjunct populations of several species which occur in Oregon should not be confused with peripheral.

**Undetermined Status (SU)** - Animals in this category are species for which status is unclear. They may be susceptible to population decline of sufficient magnitude that they could qualify for endangered, threatened, critical or vulnerable status, but scientific study will be required before a judgment can be made.

#### **OREGON NATURAL HERITAGE PROGRAM STATUS (ONHP)**

**List 1** contains taxa that are threatened with extinction or presumed to be extinct throughout their entire range.

**List 2** contains taxa that are threatened with extirpation or presumed to be extirpated from the state of Oregon. These are often peripheral or disjunct species which are of concern when considering species diversity within Oregon's borders. They can be very significant when protecting the genetic diversity of a taxon. ONHP regards extreme rarity as a significant threat and has included species which are very rare in Oregon on this list.

**List 3** contains species for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.

**List 4** contains taxa which are of conservation concern but are not currently threatened or endangered. This includes taxa which are very rare but are currently secure, as well as taxa which are declining in numbers or habitat but are still too common to be proposed as threatened or endangered. While these taxa currently may not need the same active management attention as threatened or endangered taxa, they do require continued monitoring.

**State Listed Species** - Any plant or animal species listed by the state of Oregon as threatened or endangered within the state under ORS 496.004, ORS 498.026, or ORS 564.040. (See above.)

**Survey and Manage** - As outlined in the Northwest Forest Plan, the survey and manage standards and guidelines; provide benefits to old-growth associated species, which are considered to be at risk even after establishment of mapped and unmapped Late-Successional reserves.

**Target Volume** - As used in the document, target volume refers to the volume to be offered for sale as directed by the resource area annual budget.



**The Nature Conservancy (TNC)** - An environmental group that promotes returning managed lands to their historical or natural state.

**Threatened Species** - (Refer to “Special Status Species”)

**Thousand Board Feet (MBF)** - An expression of volume of trees harvested from timber sales in thousands of board feet.

**Timber Sale Information System (TSIS)** - The national information system that tracks all facets of a timber sale/salvage.

**Total Maximum Daily Load (TMDL)** - A tool for implementing State water quality standards. It is based on the relationship between pollution sources and in-stream water quality standards. The TMDL establishes allowable pollutant loadings or other quantifiable parameters (such as temperature) for a water body and thereby provides the basis for States to establish water quality-based controls.

**Transportation Management Plan (TMP)** - The transportation plan developed for a specific area or by a specific agency that provides how and what kinds of vehicles are allowed in that area.

**Unmapped Late Successional Reserves (UMLSR)** - a small block of forest approximately 100 acres in size designated around known spotted owl activity centers located on lands in the matrix. UMLSRs were established under the direction of the Northwest Forest Plan (NFP), but are not displayed on regional maps in the NFP. The objective for these areas is to protect and restore conditions for a variety of late successional and old growth dependent species.

**Understory Reduction** - Timber cutting done to reduce the density of primarily sub-merchantable (3-7 inch diameter) shade-tolerant species in the understory for the purpose of reducing fire risk and ladder fuels, as well as to enhance health of overstory trees.

**United States Fish and Wildlife Service (USFWS)** - That branch of the Federal Government with responsibility for enforcing the Endangered Species Act and managing the network of National Wildlife Refuge System Lands.

**United States Forest Service (USFS)** - An agency within the Federal Department of Agriculture with responsibility for management of the Federal National Forests.

**Visual Resource Management (VRM)** - The inventory and planning actions to identify visual values and establish objectives for managing those values, and the management actions to achieve visual management objectives.

**Water Quality Management Plan (WQMP)** - Plans required by the State of Oregon for management of rivers and tributaries to assure that total maximum daily loads are not exceeded.

**Water Resources Department (WRD)** - The Oregon Water Resources Department (WRD) initiated the Klamath Basin Adjudication in 1975. The Klamath Adjudication is an Oregon general water claim adjudication in which the final decree will be issued by the Klamath County Circuit Court. All Adjudication claims were filed with the WRD by April 1997. The Adjudication is the first Oregon general water adjudication in which complex federal claims have been filed.

**Watershed Council** - There is ongoing participation with the Klamath Watershed Council. The BLM is represented on the Councils' Technical Advisory Committees. The council is active in coordinating watershed and water quality enhancement projects.

**Whitewater Rafting** - The recreational activity of running a river in a rubber raft or other river non-motorized craft usually when river flows are high.

**Wilderness Study Area (WSA)** - Public land under the jurisdiction of the Bureau of Land Management that has been studied for wilderness character and is currently in an interim management status awaiting official wilderness designation or release from WSA status by Congress.

**Wildfire Situation Analysis (WFSA)** - An analysis used to determine priorities when multiple fire starts and lack of resources preclude the staffing of all new fires. The Wildfire Situation Analysis will be used to document this decision.

**Wild & Scenic River System (W&S)** - A National system of rivers or river segments that have been designated by Congress and the President as part of the national Wild and Scenic Rivers System (Public Law 90-542, 1968). Each designated river is classified as one of the following:

**Wild River** - A river or section of a river free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Designated wild as part of the Wild and Scenic Rivers System.

**Scenic River** - A river or section of river free of impoundments, with shorelines or watersheds still largely primitive and undeveloped but accessible in places by roads. Designated scenic as part of the national Wild and Scenic Rivers System.

**Recreational River** - A river or section of a river readily accessible by road or railroad that may have some development along its shorelines, and that may have undergone some impoundment or diversion in the past. Designated recreational as part of the national Wild and Scenic Rivers System.









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Klamath Falls Resource Area Office  
2795 Anderson Avenue, Building #25  
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